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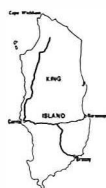
# Annual Report 1983 - 84



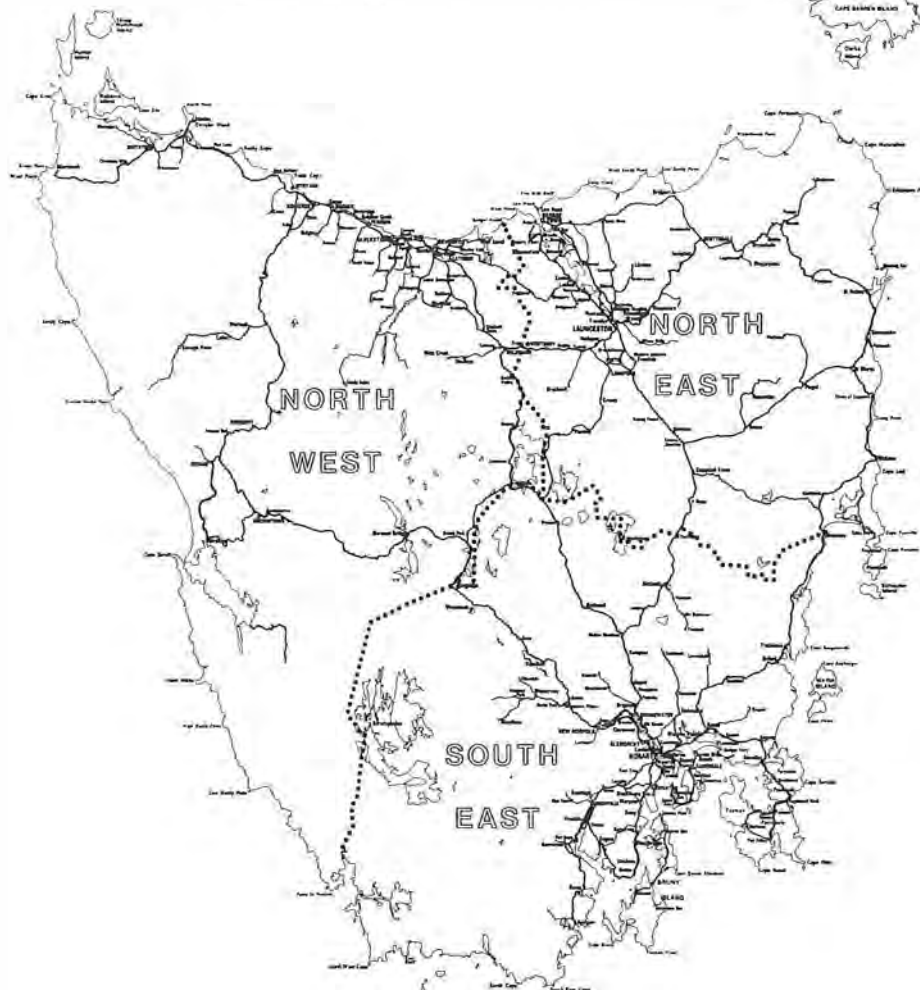
Department  
of  
Main Roads  
TASMANIA







DEPARTMENT OF MAIN ROADS  
TASMANIA  
CLASSIFIED ROAD SYSTEM



**DETAILS OF CLASSIFIED ROADS BY LENGTH & SURFACE TYPE**

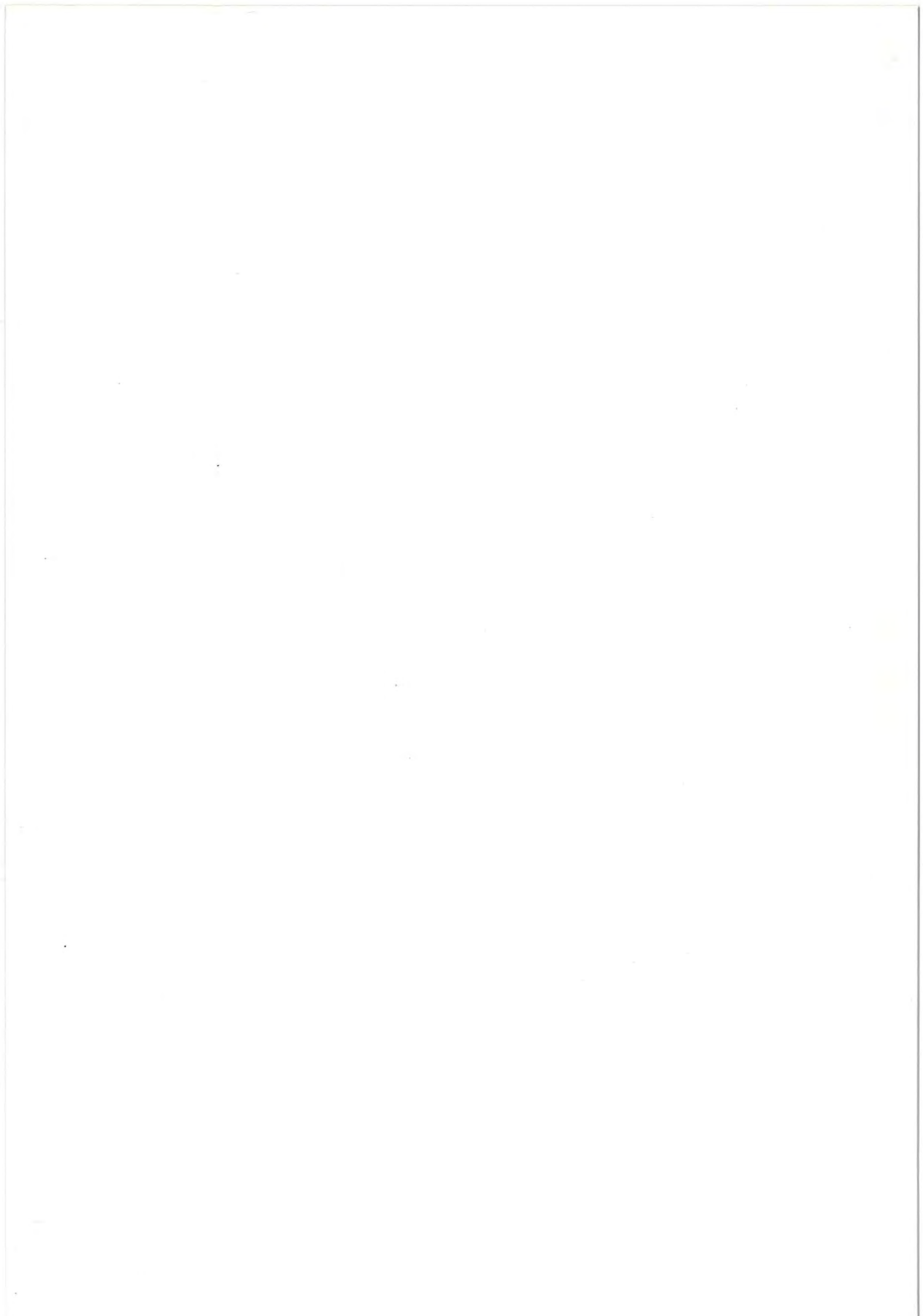
|                               | LENGTH<br>SEALED<br>km | LENGTH<br>UNSEALED<br>km | TOTAL<br>LENGTH<br>km |
|-------------------------------|------------------------|--------------------------|-----------------------|
| <b>HIGHWAYS</b>               | 1,850·93               | 92·63                    | 1,943·56              |
| <b>SUBSIDIARY ROADS</b>       |                        |                          |                       |
| <b>MAIN ROADS</b>             | 1,187·44               | 107·69                   | 1,295·13              |
| <b>SECONDARY ROADS</b>        | 242·50                 | 40·08                    | 282·58                |
| <b>DEVELOPMENTAL ROADS</b>    | 20·39                  | 24·68                    | 45·07                 |
| <b>TOURIST ROADS</b>          | 75·55                  | 96·89                    | 172·44                |
| <b>TOTAL CLASSIFIED ROADS</b> | 3,376·81               | 361·97                   | 3,738·78              |

# DEPARTMENT OF MAIN ROADS

## EIGHTH ANNUAL REPORT For the Year ended 30 June 1984

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## DEPARTMENT OF MAIN ROADS

Director of Main Roads—L. J. BAILY

Deputy-Director—P. J. WETTENHALL

Secretary—K. G. RASMUSSEN

## PRINCIPAL OFFICERS—HEAD OFFICE

Principal Engineer, Design—Vacant

Acting Principal Engineer, Construction—M. G. LINTON

Division Engineer, Road Design—W. D. COOMBS

Division Engineer, Road Construction—E. J. BARRENGER

Division Engineer, Bridges—I. A. GAGGIN

Division Engineer, Plant—T. C. FLETCHER

Assistant Secretary—R. F. READ

Chief Accountant—F. J. DRAKE

## PRINCIPAL OFFICERS—DISTRICTS

Acting District Engineer, Derwent Park—K. A. RYAN

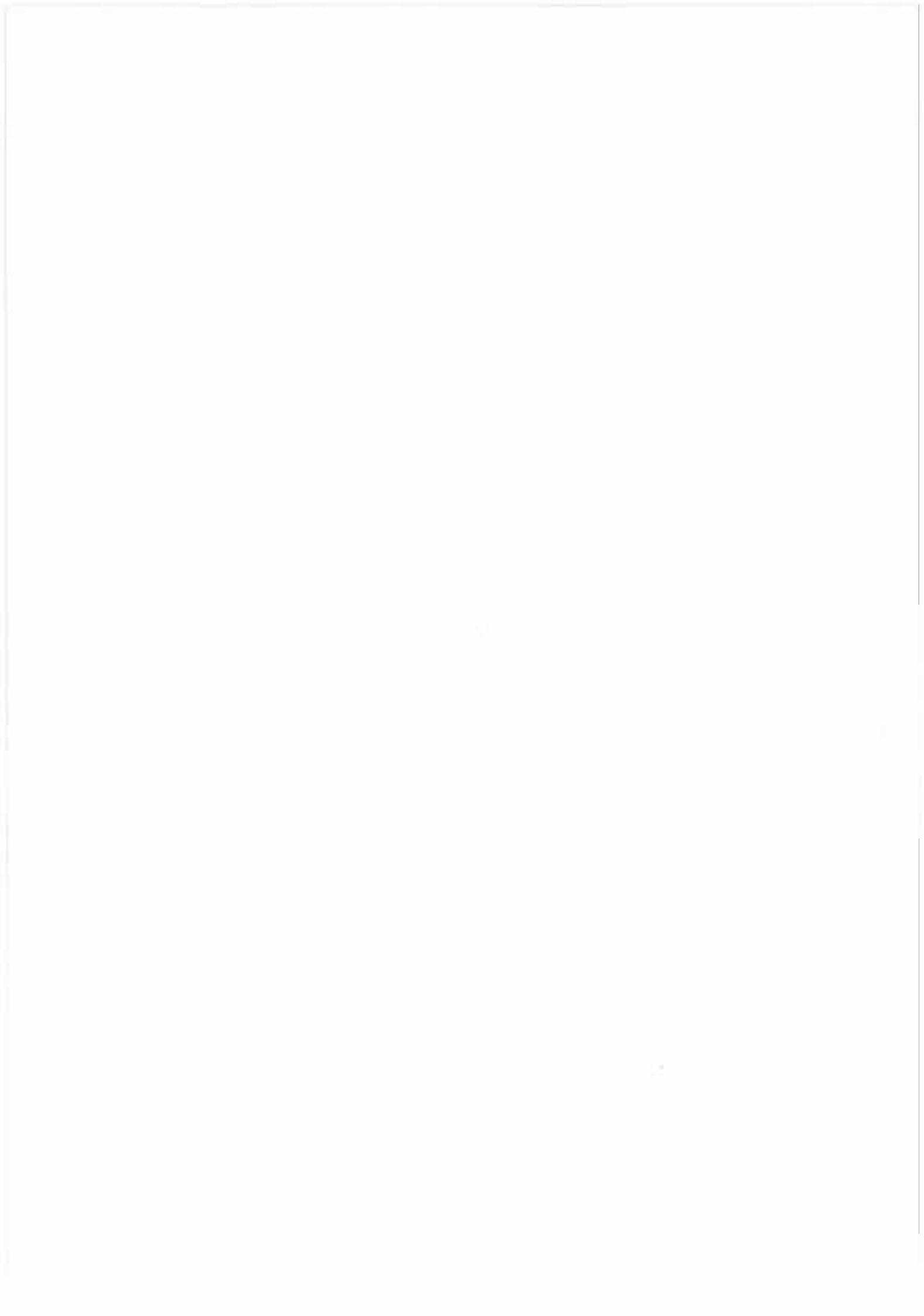
Executive Officer—G. S. GRIGGS

District Engineer, North-East, Launceston—P. A. MEYER

Executive Officer—R. A. PETERS

District Engineer, North-West, Ulverstone—A. J. CALLAWAY

Executive Officer—C. J. MORGAN



# DEPARTMENT OF MAIN ROADS

## ANNUAL REPORT FOR 1983-84

### FOREWORD

As forecast in the foreword to the 1982-83 Annual Report, the full impact of work requirements under the Commonwealth Road Grants Act 1981, the Roads Grants Amendment Act 1982 and the Australian Bicentennial Road Development Trust Fund Act 1982 has now been experienced by the Department.

The additional work, including the letting to public tender of national highway construction projects and arterial roads funded in part or whole with funds from the Australian Bicentennial Road Development Trust Fund Act, has provided a challenge to the Department, consultants of various disciplines and construction contractors. Although all three groups have experienced some problems, most have been overcome and it is considered the public purse has benefited by the challenges being accepted by all involved in the development of roads, bridges and other engineering works.

It has been suggested by a few that all construction work should be let to public tender. However, it has been generally felt by senior staff, and reinforced by experience over the past twelve months, that it is essential to retain a day labour construction force within the Department, as construction experience is not gained overnight and experience accumulated by staff and employees with twenty to forty years work in the Department is an asset that should not be lightly discarded.

Consideration must also be given to the unscheduled needs of governments, and emergency situations that periodically arise, where day labour forces can react at very short notice to implement requirements with a minimum of administrative detail, and where officers with past experience can quickly assess the needs and adjust to changing requirements as the works proceed.

The additional workload in 1983-84 has been handled with a very small increase in staff despite the retirement of some very experienced senior staff and the impending retirement of others. To overcome some of these problems the organisation of the Head Office Engineering Branch has been reviewed and some areas already changed and streamlined to cope with a changing situation—typical being the appointment of a Deputy Director to manage and co-ordinate all planning and construction activities through control of immediate and proposed future budgets.

In recognising the probable retirement of a number of senior staff over the next few years, assistance was sought and received from the Public Service Board for middle management courses specially tailored to the needs of the Department and it is hoped the Board will be able to assist further in the future. To ensure engineering officers do not become unduly specialised in a period when flexibility is essential, some officers have been rotated into other areas of engineering for short periods to broaden their experience. To date only a limited number have been rotated to other work as there are social and other constraints which limit the use of this policy, but it is hoped to continue the practice where the functions of the Department are not seriously affected.

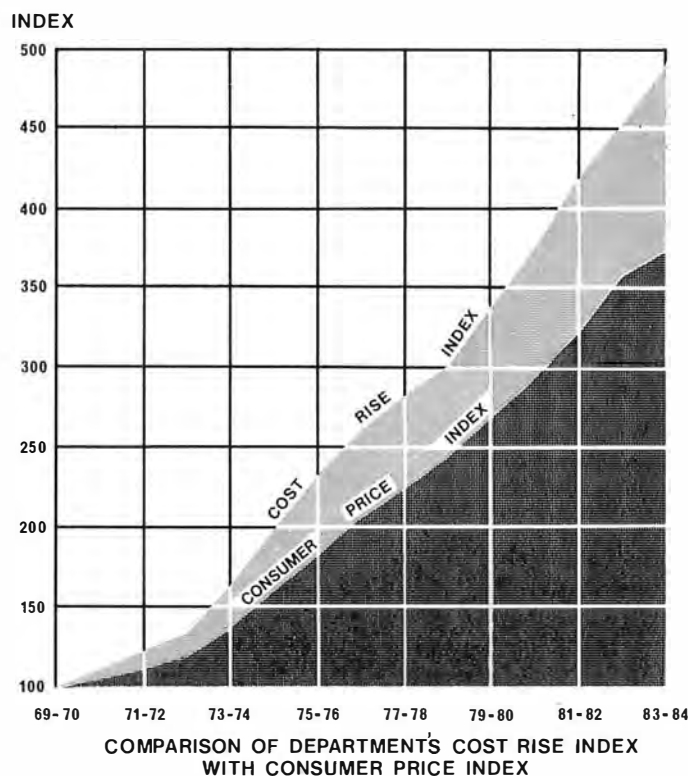
### FINANCE

#### GENERAL

The Department has continued to monitor the inflationary rises on its operations by the use of a Road System Price Index. During 1983-84 this rose at a higher rate than the Consumer Price Index. Over the fourteen years the Department's index has been produced, the total increase has been greater than the CPI.

The Road System Price Index rose by 8.1 per cent during 1983-84 while the Consumer Price Index increased by 4 per cent. Over the same period the weighted average wage paid to adult males working in the building and construction industry in Tasmania, as reported by the Australian Bureau of Statistics, rose by 8.4 per cent.

The comparison between the index developed by the Department and the Consumer Price Index adjusted to the same base year is set out below. An index produced by averaging the road construction indices of the State Road Authorities in Victoria and South Australia has been introduced into the table to further illustrate how inflationary pressures have forced costs incurred by road construction authorities to escalate at a higher rate than the Consumer Price Index.



### COMPARISON OF SELECTED INDICES

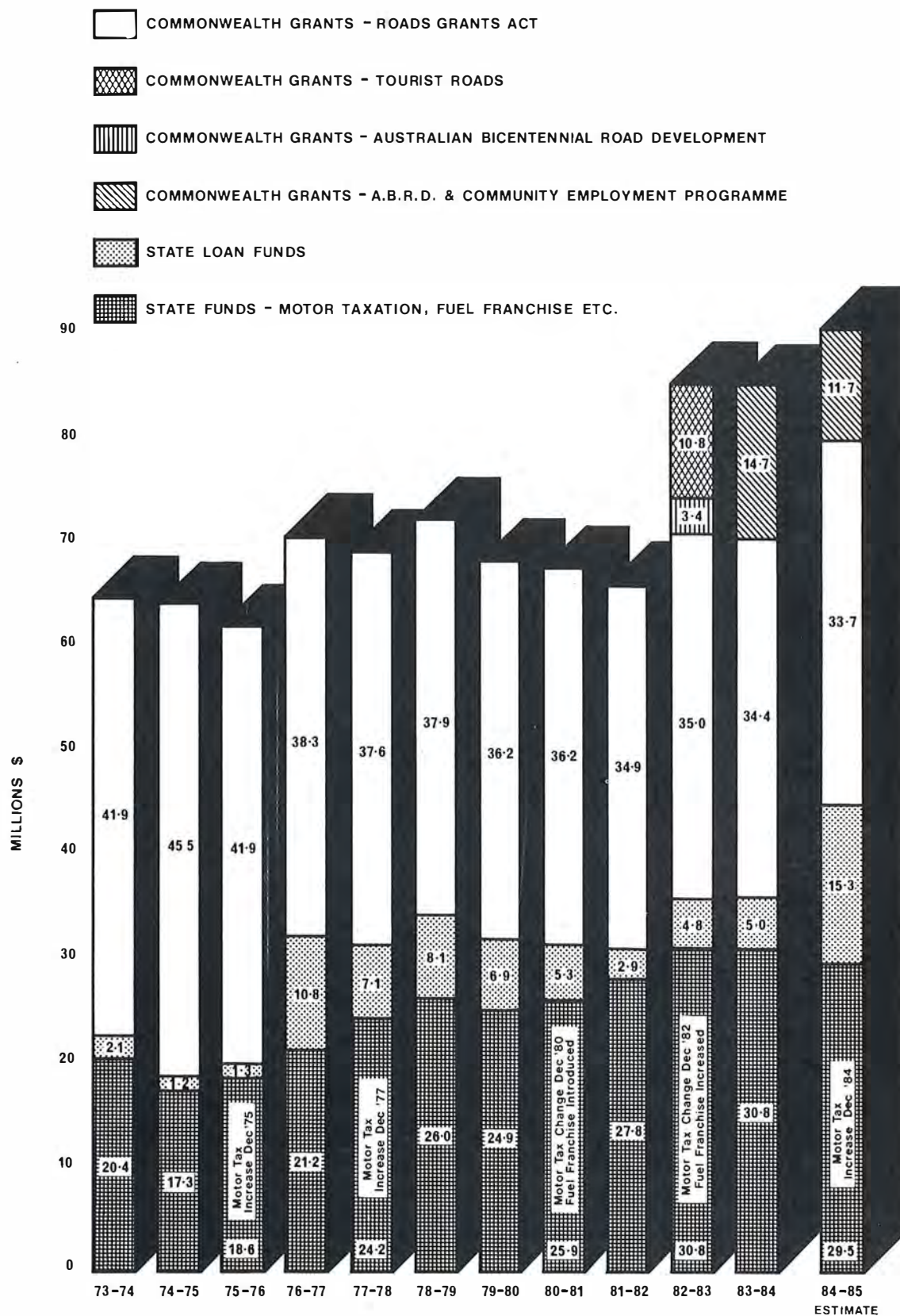
| <i>Date 30 June</i> | <i>D.M.R.</i>    |                      | <i>Average Vic/S.A. Sra's</i> |                      | <i>CPI</i>       |                      |
|---------------------|------------------|----------------------|-------------------------------|----------------------|------------------|----------------------|
|                     | <i>Index No.</i> | <i>Annual Change</i> | <i>Index No.</i>              | <i>Annual Change</i> | <i>Index No.</i> | <i>Annual Change</i> |
|                     |                  | <i>%</i>             |                               | <i>%</i>             |                  | <i>%</i>             |
| 1970.....           | 100.0            | ....                 | 100.0                         | ....                 | 100.0            | ....                 |
| 1971.....           | 110.8            | 10.8                 | 111.2                         | 11.2                 | 104.6            | 4.6                  |
| 1972.....           | 122.0            | 10.1                 | 119.9                         | 7.8                  | 111.3            | 6.4                  |
| 1973.....           | 133.8            | 9.7                  | 135.3                         | 12.8                 | 119.3            | 7.2                  |
| 1974.....           | 162.4            | 21.4                 | 165.8                         | 22.5                 | 136.8            | 14.7                 |
| 1975.....           | 199.3            | 22.7                 | 195.3                         | 17.8                 | 159.3            | 16.4                 |
| 1976.....           | 233.6            | 17.2                 | 226.9                         | 16.2                 | 183.0            | 14.9                 |
| 1977.....           | 263.5            | 12.8                 | 250.8                         | 10.5                 | 206.8            | 13.0                 |
| 1978.....           | 283.3            | 7.5                  | 268.1                         | 6.9                  | 224.0            | 8.3                  |
| 1979.....           | 300.6            | 6.1                  | 288.2                         | 7.5                  | 243.6            | 8.8                  |
| 1980.....           | 337.6            | 12.3                 | 331.1                         | 14.9                 | 268.3            | 10.1                 |
| 1981.....           | 374.1            | 10.8                 | 372.5                         | 8.2                  | 292.1            | 8.9                  |
| 1982.....           | 421.9            | 12.8                 | 422.3                         | 13.4                 | 321.0            | 9.9                  |
| 1983.....           | 451.0            | 6.9                  | 465.6                         | 10.3                 | 356.3            | 11.0                 |
| 1984.....           | 487.5            | 8.1                  | 513.0                         | 10.2                 | 370.5            | 4.0                  |

The rate of inflation affecting the operation of the Department of Main Roads for the financial year 1984-85 is estimated to be 8 per cent. Commonwealth grants available to the Department for road purposes under the Roads Grants Act were indexed by 7.48 per cent for 1979-80, 11.15 per cent for 1980-81, 8.7 per cent for 1981-82, 7.15 per cent for 1982-83 and 6 per cent for 1983-84. The increase for 1984-85 is also 6 per cent.

The bar chart opposite illustrates the funds received by the Department for roadworks. In each case the funds have been adjusted to June 1984 values by using the Department's road system price index.

The sensitivity of State funds to rises in motor taxation rates, and fuel franchise, is clearly visible.





ANNUAL ROAD FUNDS RECEIVED  
EXPRESSED IN JUNE 1984 VALUES

In recent years, Commonwealth funds granted under the Roads Grants Act, as amended, have declined in real terms. However, the decline has been partly arrested by a once only special grant of \$10 m for Tourist Roads under the Callaghan Scheme in 1982-83 and continuing grants for the Australian Bicentennial Road Development (A.B.R.D.) Program.

The A.B.R.D. Program is funded from a special Commonwealth fuel tax at the rate of two cents per litre in respect of motor spirit and diesel fuel used for home consumption.

To be eligible for A.B.R.D. funds, Tasmania must maintain its expenditure on roads in real terms each year. The Commonwealth Government has proposed a base period and a method of determining a base level of expenditure against which the State's annual expenditure on roads during the period of the A.B.R.D. Program will be compared. The base period proposed is a five year period ending 30 June 1982, and the average of the State's annual expenditure on roads for this period is its base level expenditure. It is also proposed that the Australian Bureau of Statistics' implicit price deflator for private non-dwelling construction, be used to adjust to expenditure figures for different years to enable them to be compared in constant price terms.

### COMMONWEALTH GRANTS FOR ROADS

Under the Roads Grants Act 1981 and the Australian Bicentennial Road Development Trust Fund Act 1982 the Commonwealth provided financial assistance to the States for roads in the financial year 1983-84. The total grants to Tasmania were \$47 452 555 made up as follows:—

|                                                    | <i>Roads<br/>Grants Act<br/>1981</i> | <i>A.B.R.D.<br/>Act 1982</i> |
|----------------------------------------------------|--------------------------------------|------------------------------|
|                                                    | \$                                   | \$                           |
| National Roads—Construction and Maintenance . . .  | 15 887 000                           | 3 818 039*                   |
| Arterial Roads—Construction . . . . .              | 9 121 000                            | ....                         |
| Rural Arterial Roads—Construction . . . . .        | ....                                 | 1 214 432                    |
| Urban Arterial Road—Construction . . . . .         | ....                                 | 4 837 791                    |
| Local Roads—Construction and Maintenance . . . . . | 9 341 000                            | 3 233 293                    |
|                                                    | 34 349 000                           | 13 103 555                   |

\*For road construction purposes only.

The 1981 Act discontinued the State Contribution (Quota) System.

Under the Roads Grants Amendment Act 1982 the following allocation of road funds was made in respect of 1984-85:—

|                                                       | \$         |
|-------------------------------------------------------|------------|
| National Roads—Construction and Maintenance . . . . . | 16 846 000 |
| Arterial Roads—Construction . . . . .                 | 9 672 000  |
| Local Roads—Construction and Maintenance . . . . .    | 9 906 000  |
|                                                       | 36 424 000 |

Under the Australian Bicentennial Road Development Trust Fund Act 1982 Tasmania anticipates receiving approximately \$12 400 000 in 1984-85 made up as follows:—

|                                             | \$           |
|---------------------------------------------|--------------|
| National Roads—Construction . . . . .       | 3 176 000    |
| Rural Arterial Roads—Construction . . . . . | 3 710 000    |
| Urban Arterial Roads—Construction . . . . . | 3 687 000    |
| Local Roads—Construction . . . . .          | 1 827 000    |
|                                             | \$12 400 000 |

### SPECIAL COMMONWEALTH FUNDS

Funds for the construction of the Second Hobart Bridge provided by the Commonwealth amounted to \$5 523 193 as compared with \$16 710 944 in 1982-83.

### ROAD FUNDS FROM STATE RESOURCES

Motor Taxation—receipts amounted to \$17 357 028 as compared with \$17 020 946 in 1982-83 an increase of 2 per cent.

Public Vehicle Fees—fees collected during the year amounted to \$111 028 as compared with \$109 527 in 1982-83, an increase of 1.4 per cent.

Petroleum Products Business Franchise Licence Fees—receipts amounted to \$11 902 268 as compared with \$9 836 840 in 1982-83, an increase of 20.1 per cent which reflects the impact of a full year's collection of the higher fees charged as from December 1982.

Loan Funds—funds provided to the Department for roads, bridges and associated works, upgrading of fishing ports, jetties and facilities for fishermen and the Launceston Flood Protection Scheme totalled \$6 582 171, an increase of 32.5 per cent as compared with the previous year.

## FUNDS PROVIDED BY OTHER DEPARTMENTS AND AUTHORITIES

Payments received by the Department for works and services carried out for other Departments and Authorities amounted to \$1 763 859 as compared with \$4 830 996 in 1982-83. The Department was involved with road and bridge construction works for the Hydro-Electric Commission and minor works for the Construction, Education, Forestry, Health, Housing, Metropolitan Water Board, National Parks and Wildlife Service and Transport Departments.

## STATEMENT OF SOURCE AND APPLICATION OF FUNDS

As shown in the following statement, the funds obtained during 1983-84 from all sources (including the Special Commonwealth funds for the Second Hobart Bridge project) amounted to \$95 019 404, a decrease of 6.2 per cent as compared with 1982-83.

Excluding the funds for the Second Hobart Bridge, the total of funds from all other sources amounted to \$89 496 211 in 1983-84 as compared with \$84 904 602 in 1982-83, an increase of 5.4 per cent.

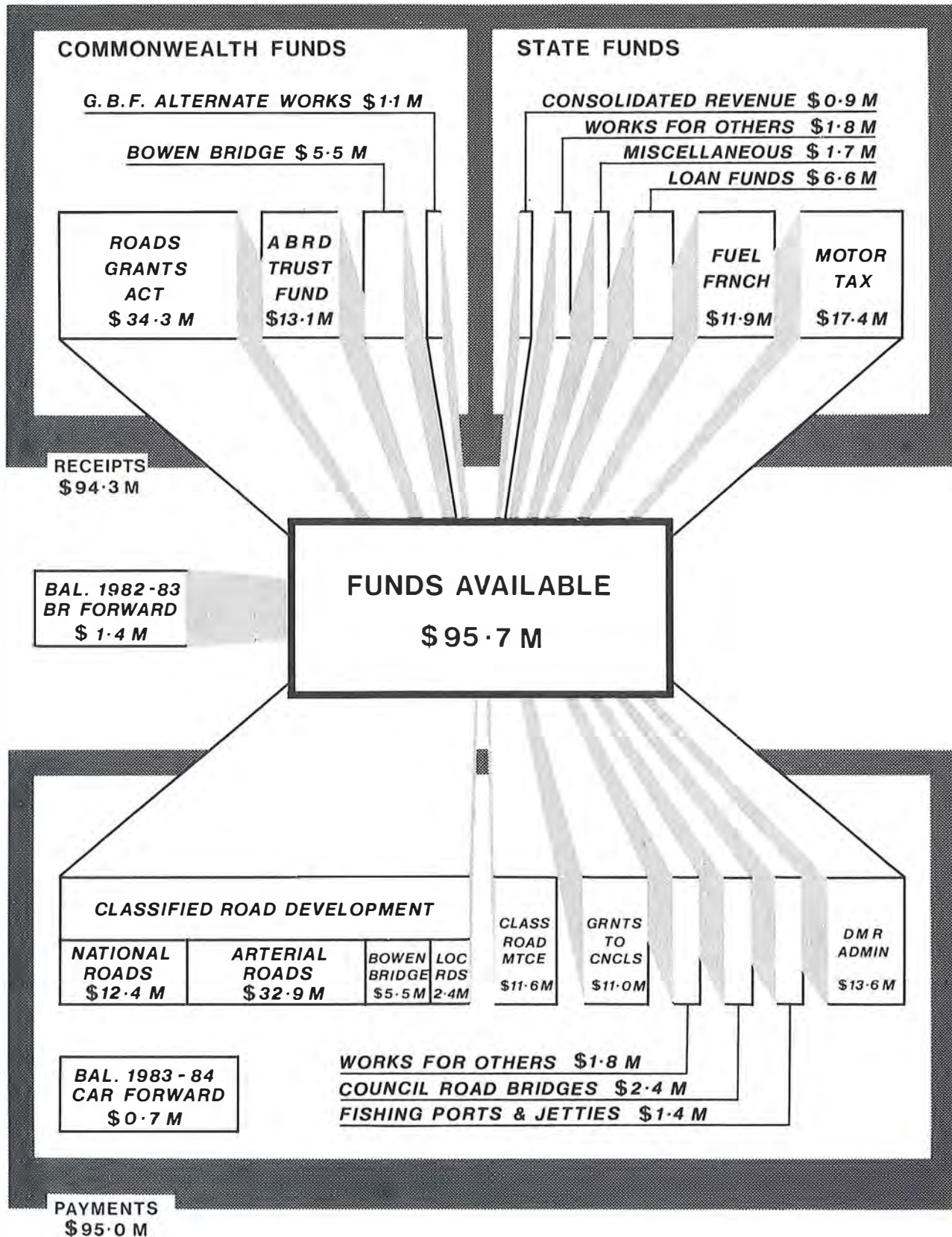
### SOURCE OF FUNDS

| 1982-83              |                                                                                                | 1983-84    |                     |
|----------------------|------------------------------------------------------------------------------------------------|------------|---------------------|
| \$                   |                                                                                                | \$         | \$                  |
|                      | State Highways Trust Fund—                                                                     |            |                     |
| 28 519 086           | (a) State Motor Taxation, Public Vehicle Fees, Fuel Franchise and Miscellaneous Receipts ..... | 30 925 140 |                     |
| 35 525 606           | (b) Commonwealth Grants for Roads .....                                                        | 47 452 555 | 78 377 695          |
| 4 969 472            | Loan Funds .....                                                                               |            | 6 582 171           |
| 26 710 944           | Special Commonwealth Funds .....                                                               |            | 6 689 313           |
| 781 720              | Consolidated Revenue Fund .....                                                                |            | 914 195             |
| 4 830 996            | Funds Provided by other Departments and Authorities .....                                      |            | 1 763 859           |
| ....                 | Net decrease in funds carried forward .....                                                    |            | 692 171             |
| <u>\$101 337 824</u> |                                                                                                |            | <u>\$95 019 404</u> |

### APPLICATION OF FUNDS

| 1982-83              |                                                       | 1983-84    |                     |
|----------------------|-------------------------------------------------------|------------|---------------------|
| \$                   |                                                       | \$         | \$                  |
|                      | State Highways Trust Fund—                            |            |                     |
| 52 335 281           | Roadworks .....                                       | 68 149 248 |                     |
| 11 922 646           | Bridgeworks .....                                     | 9 929 642  |                     |
| 3 164                | Ferries .....                                         | 15 096     | 78 093 986          |
|                      | Loan Funds—                                           |            |                     |
| 1 973 500            | Roadworks .....                                       | 4 996 295  |                     |
| 238 130              | Jetties and Facilities for Fishermen .....            | 250 000    |                     |
| 275 000              | Launceston Flood Protection Scheme .....              | 282 171    |                     |
| 2 482 842            | Bruny Ferry Terminals .....                           | 53 705     |                     |
| ....                 | Upgrading of Fishing Ports .....                      | 1 000 000  | 6 582 171           |
|                      | Special Commonwealth Funds—                           |            |                     |
| 16 710 944           | Second Hobart Bridge .....                            | 5 523 193  |                     |
| 9 024 120            | Tourist Road Development Roadworks .....              | 975 880    |                     |
| ....                 | Community Employment Program .....                    | 42 526     |                     |
| ....                 | Gordon-below-Franklin Alternate Works .....           | 1 123 594  | 7 665 193           |
|                      | Consolidated Revenue Fund—                            |            |                     |
| 443 840              | Departmental Administration .....                     | 483 237    |                     |
| 228 360              | Workers' Compensation (Other Departments) .....       | 260 190    |                     |
| 74 982               | Repairs to Jetties and Facilities for Fishermen ..... | 82 206     |                     |
| 34 538               | Other Miscellaneous Expenses .....                    | 88 562     | 914 195             |
| 4 830 996            | Works for other Departments and Authorities .....     |            | 1 763 859           |
| 759 481              | Net increase in funds carried forward .....           |            | ....                |
| <u>\$101 337 824</u> |                                                       |            | <u>\$95 019 404</u> |





### RECEIPTS & PAYMENTS 1983-84



## STATE HIGHWAYS TRUST FUND

The State Highways Trust Fund Account is established under the Roads and Jetties Act 1935. The fund is credited with the following moneys:—

- (1) all grants made by the Commonwealth under the Roads Grants Act 1981 and the Australian Bicentennial Road Development Trust Fund Act 1982;
- (2) all State motor taxation;
- (3) public vehicle fees imposed under Section 20A of the Traffic Act 1925;
- (4) contributions by Municipal Councils for the maintenance of classified roads;
- (5) receipts from sale of stores (other than plant);
- (6) any moneys provided by Parliament for the purposes of the fund; and
- (7) such other moneys (if any) as the Treasurer may direct.

The fund is debited with the following:—

- (a) expenses incurred in the construction, reconstruction and maintenance of State Highways and other classified roads;
- (b) costs incurred in the maintenance of Council roads which the Minister has agreed to subsidise;
- (c) contributions to the Bruny, Flinders and King Island Municipalities of portion of the Motor Tax collected in those Municipalities;
- (d) all expenditure incurred under the provisions of the Roads Grants Act 1981 and the Australian Bicentennial Road Development Trust Fund Act 1982;
- (e) costs of stores and materials (other than plant); and
- (f) repair and renewal of bridges on Council roads.

A summarised statement of receipts and payments for the State Highways Trust Fund Account for 1983-84 is set out below, together with the corresponding figures for 1982-83.

A net profit of \$12 774.62 was achieved on the one contract completed by the Department and for which accounts were finalised in this financial year. This amount is included under Miscellaneous Receipts.

### STATE HIGHWAYS TRUST FUND 1983-84

| 1982-83      |                                                          | Receipts | 1983-84      |
|--------------|----------------------------------------------------------|----------|--------------|
| \$           |                                                          |          | \$           |
| 644 547      | Balance brought forward .....                            |          | 428 148      |
| 35 525 606   | Commonwealth Grants for roads .....                      |          | 47 452 555   |
| 17 020 946   | Motor Taxation .....                                     |          | 17 357 028   |
| 109 527      | Public Vehicle Fees .....                                |          | 111 028      |
| 9 836 840    | Petroleum Products Business Franchise Licence Fees ..... |          | 11 902 268   |
| 1 551 773    | Miscellaneous Receipts .....                             |          | 1 554 816    |
| 64 689 239   | Total .....                                              |          | 78 805 843   |
|              |                                                          | Payments |              |
| 17 438 067   | National Roads .....                                     |          | 18 034 795   |
| 32 884 700   | Arterial Roads .....                                     |          | 43 008 144   |
| 13 938 324   | Local Roads .....                                        |          | 17 051 047   |
| 428 148      | Balance carried forward .....                            |          | 711 857      |
| \$64 689 239 | Total .....                                              |          | \$78 805 843 |

## LOAN FUND EXPENDITURE

The loan funds of \$6 582 171, allocated to the Department for roads and bridges and other works, were applied as follows:—

| 1982-83     |                         | 1983-84     |
|-------------|-------------------------|-------------|
| \$          |                         | \$          |
| 1 973 500   | Roads and Bridges ..... | 4 996 295   |
| 2 995 972   | Other Works .....       | 1 585 876   |
| \$4 969 472 | Total .....             | \$6 582 171 |

A schedule of expenditure items and amounts is shown in Annexure A. It should be noted that the loan fund amounts for the road and bridge items listed in the schedule were in most cases supplemented by funds from the State Highways Trust Fund.

## **FINANCIAL ASSISTANCE TO LOCAL GOVERNMENT AUTHORITIES**

Under the provisions of the Roads Grants Act 1981, the Australian Bicentennial Road Development Trust Fund Act 1982 and the Roads and Jetties Act 1935 the Department made direct grants to local Government authorities based on a formula approach for construction and/or maintenance of local roads and approved projects for arterial roads controlled by Councils. The direct grants to Councils totalled \$10 695 318, an increase of 3.9 per cent over the amount of the direct grants provided in 1982-83.

In addition to the direct grants, the Department also provided indirect financial assistance to local government authorities. Under the provisions of the Roads and Jetties Act 1935 the Department financed the repair and renewal of bridges on Council roads and carried out these bridgeworks. The Department maintained four Council Roads which have been declared as subsidised roads and provided funds to the National Parks and Wildlife Service and the Hydro-Electric Commission for work on some local roads. The indirect financial assistance to Councils totalled \$2 583 128 a decrease of 0.3 per cent over the preceding year.

The total of direct grants and indirect financial assistance to Councils was \$13 278 446 an increase of 3.1 per cent over 1982-83. The amounts of direct grants and indirect financial assistance to Councils for the various categories of roads and works are shown in Annexure B.

## **PLANNING AND DESIGN**

### **PROJECT PLANNING**

#### **BASS HIGHWAY**

##### **Chasm Creek to Penguin**

An 'Overview Report' was prepared describing the options for upgrading this section of the Bass Highway to four lanes divided, with access control over 11 km. Following approval in principle by the Commonwealth Department of Transport, a public display was held in consultation with the Penguin Municipal Council. The main issue was the choice between a foreshore route north of Sulphur Creek and a deviation around the base of the excarpment to the south of the built up area. The deviation was the option favoured by the majority of the people who attended the public display.

##### **Ulverstone to Forth River**

Following further examination, a Highway Planning Report was submitted to the Commonwealth Department of Transport.

##### **Prospect Bypass—Prospect Connector**

A Highway Planning Report was submitted to the Commonwealth Department of Transport in July 1983 recommending that the Bypass be constructed initially as a four lane divided highway, but leaving the question of connections between the Bypass and the local network to await the outcome of a Traffic Study.

The Traffic Study recommended that the Prospect Connector be adopted, including ramps between the Bypass and the Connector. This was referred to the Commonwealth Department of Transport in a supplementary Highway Planning Report in December 1983. The matter was still under negotiation at the end of the financial year.

##### **Prospect Vale to Deloraine**

An 'Overview Report' is being prepared describing existing deficiencies in the highway and outlining optional solutions.

#### **EAST TAMAR HIGHWAY (DEVELOPMENT ROAD)**

A comprehensive study of the existing highway from the Alanvale Connector to George Town was completed during the year. The study has identified those areas where further improvements are required and their relative priorities. It is proposed to invite comment from local authorities prior to producing a Planning Report for submission to the Commonwealth Department of Transport.

## **HOBART SOUTHERN OUTLET ROAD**

### **Davey Street to Algonia Main Road**

A planning report was prepared to assess priorities for major roadworks on the whole length of the Southern Outlet Road between Davey Street and Algonia Main Road. The main conclusion of the report was that there is justification for a second carriageway between Davey Street and 'The Lea' turnoff. It was further recommended that a full grade separated interchange, to a modified plan, be constructed at Olinda Grove, following the transfer of the Hobart Matriculation College to the Mount Nelson Campus.

### **Kingston Bypass**

A review of the various optional arrangements for the interchange with the Huon Outlet and for the at-grade junction at the Channel Highway continued during 1983-84.

## **MIDLAND HIGHWAY**

### **Strathroy to Breadalbane**

A supplementary Highway Planning Report prepared during the year was approved by the Commonwealth Department of Transport in February 1984. This comprised a new four lane divided highway west of the existing highway, with an interim roundabout junction at Breadalbane.

## **TASMAN HIGHWAY**

### **Falmouth to Chain of Lagoons**

Investigation of the route of the proposed new road continued and culminated in the presentation of evidence to the Parliamentary Standing Committee on Public Works at a hearing held in the Fingal Council Chambers on the 7 and 8 March 1984. The route generally has been determined with only minor variations likely within a narrow corridor, except for the bypass of Four Mile Creek village, where three optional routes are still under consideration by the Parliamentary Standing Committee on Public Works.

## **ROAD DESIGN**

### **ALGONIA MAIN ROAD**

Design of Stage 1, consisting of some 2.82 km but excluding the junctions with the Channel Highway and Roslyn Avenue and the Diamond Drive intersection, was completed.

Design of Stage 2, the balance of the works, is nearly complete.

## **BASS HIGHWAY**

### **Deloraine Bypass**

Detailed design of the Deloraine Bypass is currently being undertaken. Property boundaries have been determined and acquisition surveys have commenced.

### **Don Hill to Forth**

Design of Stage 1 was completed in December 1983. It consists of the second carriageway at Lillicos Beach and the redevelopment of local roads on both sides of the highway at Leith.

Design of Stage 2 was essentially completed by the end of the year.

### **Burnie Stage 'B'**

This project is being constructed under five separate road and bridge contracts. Design plans for the North Terrace section were completed and final design is well advanced for the section between the View Road Overpass and North Terrace.

### **Wiltshire Junction to Smithton**

Design was completed for 11 km between the Stanley Highway junction and the Irishtown Main Road east of Smithton.

**ARTHUR HIGHWAY****Eaglehawk Neck to Port Arthur**

A preliminary design of an improvement along the existing road (in plan view only on orthophotos) between Eaglehawk Neck and Taranna has been prepared. Further south a design was completed for improvements to approximately 1 km at Oakwood.

**CRADLE MOUNTAIN TOURIST ROAD**

The design for a 5.5 km section between Lehmans and Weaning Paddock Creeks was completed and the design of the section west towards Learys Corner is well advanced.

**EAST DERWENT HIGHWAY****Shones Corner to Bowen Bridge**

Design plans were completed and the roadworks finished in time for the opening of the Bowen Bridge in February 1984.

**EAST TAMAR HIGHWAY**

Design was completed for a major improvement at the thermal power station corner. Design is also well advanced for improvements to the road alignment at Williams Creek, including widening of the existing bridge.

**GUILDFORD TO HAMPSHIRE ROAD LINK**

The project has been divided into three sections and the design is to be undertaken by consultants.

**HOBART SOUTHERN OUTLET ROAD****Davey Street to Macquarie Street**

Design was completed and included provision for signalised junctions at Davey Street and Macquarie Street.

**Olinda Grove**

Design plans were prepared for modification to the existing intersection at Olinda Grove, with widening to dual carriageway on the immediate approaches to cater for the installation of traffic signals, which will operate during the period of construction of the interchange. This is an interim measure and design is currently in progress for the ultimate configuration of a grade separated interchange at Olinda Grove.

**Sandfly to Vinces Saddle**

Detailed design of this new highway was completed, except for the junction with the Sandfly Secondary Road which is currently in progress.

**Zomay Avenue to Davey Street**

Design for the second carriageway was completed.

**Zomay Avenue to Olinda Grove**

Design for this section to be a dual carriageway is in progress.

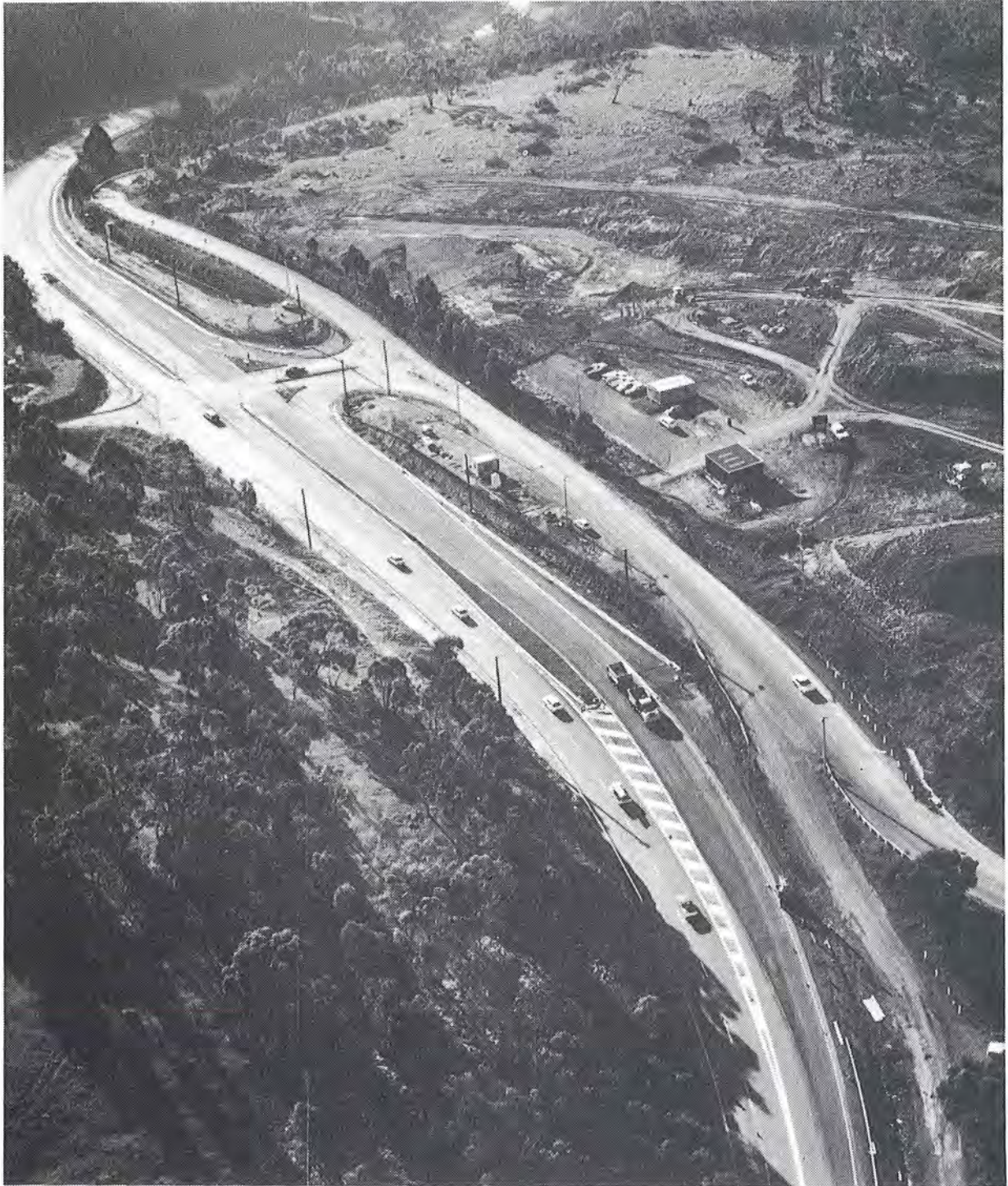
**HUON HIGHWAY****Vinces Saddle to Grove**

This section of the highway has been divided into three parts for design purposes. Plans for the 2.5 km section from Dip Road to Grove have been issued and plans for the northern part of Vinces Saddle to Dip Road are nearing completion.

**LAKE LEAKE MAIN ROAD**

A 12 km section of this highway has been designed by Consultants.





*Interchange—Olinda Grove Mt Nelson*



**LAUNCESTON SOUTHERN OUTLET ROAD****Glen Dhu Corridor Route**

Design of this four lane divided highway is progressing. The route passes through a heavily built up residential and commercial area and to provide for access to abutting properties and streets, service roads have been designed.

**Mount Pleasant Interchange to Glen Dhu Interchange**

Design for this project was completed during the year.

**Mount Pleasant Interchange to Strathroy**

Plans for this project including drawings for the temporary connection to the Midland Highway at Strathroy were completed.

**Strathroy to Breadalbane**

Final design is in progress. The first section extends from Strathroy to just north of the existing highway at Breadalbane. The second section includes an at-grade roundabout at Breadalbane and a new road link to the Evandale Main Road.

**LILYDALE MAIN ROAD****Prossers Forest Road to Underwood**

Design has been completed. The total length of the project is 2.8 km including a deviation of 1.1 km.

**Underwood Deviation**

Design of this major 4 km deviation has been completed.

**LYELL HIGHWAY****New Norfolk to Gretna**

Design has been completed to Belmont, approximately 1 km east of Rosegarland.

**MIDLAND HIGHWAY****Oatlands Bypass**

Design of the Oatlands Bypass was completed.

**Bridgewater Bypass**

Design plans were completed.

**SHEFFIELD MAIN ROAD**

Three sections have been listed for design and the first of these, 0.75 km at Stoodley Plantation, was completed. The second section consists of an improvement at Lower Creek and the third section consists of nearly 3 km west of Railton.

**TASMAN HIGHWAY****Branxholm to Derby**

Design of this 7.3 km section is progressing. As well, a deviation of approximately 1 km is being investigated east of the Derby Back Road in the area of Valley Pond.

**Extensions to Davey and Macquarie Streets**

Detailed design has commenced to extend the Davey Street/Macquarie Street couplet to Park Street, and extend the Tasman Highway across the old railway line to Park Street.

**WEST TAMAR HIGHWAY****Cormiston Creek to Legana**

Detailed design and preparation of drawings has continued at a rate to meet construction requirements. Plans have been issued for 1 km between Cormiston Creek and Radio Station 7LA and 3.7 km from Danbury Park Drive (south) to Bindaree.

**Muddy Creek to Lanena**

The design of three northbound and two southbound passing bays has been completed.

**OTHER WORKS**

In addition to the projects described, designs were carried out for minor projects on the Arthur, Lake and Murchison Highways and the Bruny, Colebrook, Frankford, Henty and Mersey Main Roads.

**BRIDGE DESIGN**

The more important designs completed were:—

Jones Street Underpass on the Burnie Highway Development Stage B;  
Velodrome Access Bridge at Prospect, Launceston;  
Pipers River Bridge on the Lilydale Main Road at Underwood; and  
Kingston Interchange Underpass on the Hobart Southern Outlet Road at Kingston.

The more important designs in hand but not completed were:—

Turners Beach Overpass on the Bass Highway;  
Olinda Grove Overpass on the Hobart Southern Outlet Road; and  
Thistle Street Footbridge on the Launceston Southern Outlet Road.

Preliminary design studies carried out were:—

Two major overpasses and a large culvert on a deviation of the Bass Highway; and  
Replacement of the Henty River Bridge on the Henty Main Road.

**TRAFFIC SERVICES****TRANSPORTATION STUDIES****Launceston**

The corridor assessment of the south west sector of Launceston was completed. The assessment analysed the predicted demand for various alternative connections to the Prospect Bypass. In addition, tests were made of the predicted vehicular demand of Wellington Street during the various phases of construction of the Launceston Southern Outlet Road.

**Ulverstone**

A small scale study was conducted in order to determine the origin and destination of vehicular trips of Ulverstone and thus ascertain the importance of various road links in Ulverstone following the completion of the Ulverstone Bypass.

**TRAFFIC COUNTING**

The collection of traffic volume data on the State road system continued.

**ROAD DIRECTION SIGNING**

Most of the signs to complete the program in the rural areas have been manufactured. It is expected that all of the signs for rural areas will have been erected by the end of the next financial year.

**TOURIST SIGNING**

The Department continues to be heavily involved in tourist orientated signing.

## VEHICLE PERMITS

A total of 3 180 permits were issued for the movement of overweight and/or overdimensional vehicles during the year. This compares with 2 972 issued during 1982-83.

## SCIENTIFIC COMPUTER SECTION

The communications node now supports twenty-one work stations, including a recently acquired graphics display unit.

An extensive communications system is now available to each user. The link to the CEANET facility in Melbourne has permitted exploration of graphical techniques in both the road and bridge design areas.

A prototype project to provide microcomputer support for the activities of the Right of Way Section is proceeding. Its success so far has led to detailed investigation into implementation of a similar, but more ambitious system to support the Department's Road Inventory. The classified roads inventory, in standard NAASRA format, was transferred to the State Computer Centre UNIVAC during the year.

## RIGHT OF WAY CONTROL

The Department has become increasingly involved throughout the year in planning matters associated with the inter-relationship between highways and land use. This aspect of planning has not been fully taken into account in the past. These matters, of course, have a direct influence on right of way control for both existing and proposed highways.

During the year the Department has been actively engaged in preparing reports and commentary on matters involving highway/land use planning for a number of Government committees such as the Development Review Working Group, the Australian Institute of Urban Studies and others, set up to examine individually various development control and regulation procedures. Developments whether they be industrial, commercial or residential (and including subdivisions) have a critical effect on the viability of the arterial routes with respect to efficiency and safety.

In consideration of subdivisional and other types of roadside developments referred to it by the Commissioner for Town and Country Planning and Councils, the Department must look primarily at the consequences for the State road concerned. Where adequate land use planning has been carried out in conjunction with highway requirements, problems are minimized.

The Department has provided advice during the year in relation to schemes under preparation, new schemes, amendments to schemes, rezoning proposals and other matters. The schemes involved included George Town, Oatlands, Portland, Great Lake, Launceston, Sorell, Huon, Brighton, Devonport, Claremont and Kingborough.

The State road system is a significant community asset, the construction and maintenance of which is very expensive. As a consequence, this Department considers it imperative that the legal basis for planning appeals be amended as soon as practicable so that a uniform Statewide and simplified procedure is available whereby such appeals, on behalf of the community, are feasible. The Department is frequently faced with the problem of not placing undue restrictions on development and at the same time protecting the level of future service of its roads.

In addition to the matters involving land use developments in relation to State roads, Right of Way control included consideration of service installations, proclamation and property matters, statutory access control and advice to solicitors and others on property and access queries.

The activities involving Right of Way Control included matters in the following specific fields:—

|                                                                                                                                   | 1982-83      | 1983-84      |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|
| (i) Subdivisional and Development Matters.....                                                                                    | 307          | 417          |
| (ii) Public Utility Service Installation in State roads.....                                                                      | 219          | 239          |
| (iii) Roads and Jetties Act 1935, Proclamation Matters .....                                                                      | 41           | 24           |
| (iv) Matters associated with the updating of access arrangements and the issue of licensed accesses on limited access roads ..... | 135          | 34           |
| (v) Preparation and co-ordination of advice on new or amended Statutory Planning Schemes and Outline Development Plans .....      | 6            | 15           |
| (vi) General and Limited Access Enquiries (Property and Other) Concerning the State Road System.....                              | 196          | 232          |
| (vii) Obtaining and providing advice in relation to Crown Land Transactions .....                                                 | 202          | 156          |
| (viii) Miscellaneous Matters.....                                                                                                 | 132          | 66           |
| TOTAL .....                                                                                                                       | <u>1 265</u> | <u>1 183</u> |



## **LAUNCESTON FLOOD PROTECTION SCHEME**

The Department continued to provide engineering liaison and a check on the expenditure of State funds provided for capital works, and the maintenance of the flood protection system being carried out by the Corporation of the City of Launceston, in accordance with the terms of the Agreement.

Approximately \$269 000 was expended on works and special investigations during 1983-84 and this amount, combined with a carryover from 1982-83 brought the total expenditure for 1983-84 to \$282 000. The main works undertaken were the continuing repair of damage due to settlement including drainage outfalls through the levees and the progressive topping up of the levees to design height.

During 1983-84 the Water Research Laboratory of the University of N.S.W. was commissioned to undertake a special hydraulic investigation concerning maximum possible flood levels in the South Esk with respect to the Evandale Saddle. Raising the saddle by means of levees was proposed as part of the original flood scheme by the late Professor Munro. The investigation being undertaken by the Water Research Laboratory may show that such levees are not necessary, in which case a significant saving in cost will be effected. The final report of the Water Research Laboratory is expected early in 1984-85. Cost of the investigation is expected to be approximately \$25 000.

In conjunction with the Treasury, discussions were also held with officers of the Corporation with a view to revising the present cost sharing arrangement whereby the State has been responsible for substantial annual costs for certain works as set out in the Agreement. It was agreed that any furtherance of this proposal could only come after top level discussions between the Government and the Corporation.

## **MARINE BOARD WORKS**

### **PORT OF GRASSY, KING ISLAND**

The port is managed by the King Island Marine Board under lease from the State in accordance with the terms of the King Island Port Facilities Agreement Act 1971—administered by the Treasury.

The Department of Main Roads undertakes engineering oversight of the port, liaising as necessary with the Treasury and the King Island Marine Board.

During 1983-84 investigations were undertaken into the erosion by wave action of a relatively small section of the rock filling under the 'inside' end of the wharf and plans were prepared for repair work. Investigations were also commenced into the spalling off of the concrete that had been observed under some of the precast deck slabs at the inner end of the wharf.

## **HYDRAULICS**

Hydraulic survey was undertaken on a total length of approximately 65 km of road (including approximately 20 km of National Highways) prior to design for new work or reconstruction including sections of the Midland and Bass Highways and the Launceston Southern Outlet Road.

Detailed hydraulic investigation and drainage design was carried out in sections or junctions of major highways as follows:—

Hobart Southern Outlet, Lyell Highway, Huon Highway, West Tamar Highway, Bass Highway (non National Highway section), Lilydale Main Road, Algona Main Road, Coles Bay Tourist Road, Lake Highway, Frankford Main Road, Lake Leake Main Road, Fenton Main Road, Mole Creek Main Road.

Approximately 140 separate hydraulic investigations (both major and minor) were made for bridges, culverts and road drainage. Included were works on the majority of highways and main roads as well as on secondary and Council roads.

Although the foregoing work was significant no really major bridge structures featured in the hydraulic investigations—most of the hydraulic investigations for the more important bridge structures on highways were undertaken in previous years. Sizeable bridges on secondary roads that were investigated included:—

Southport Rivulet Bridge on the Hastings Caves Tourist Road; Pipers River Bridge on the Lilydale Main Road; Lune River Bridge on the Catamaran Road; and George River Bridge on the Binalong Bay Road.

General hydraulic investigation and design was undertaken on approximately forty-five different subjects including subdivision drainage onto roads, flooding problems, road drainage, nuisance investigations, erosion control, irrigation, etc.

## CONSTRUCTION, MAINTENANCE AND OPERATIONS

### MAJOR WORKS COMPLETED

The following bridgeworks were completed during the year:—

| <i>Name</i>                                         | <i>Road</i>                          | <i>Cost to 30.6.84</i> |
|-----------------------------------------------------|--------------------------------------|------------------------|
|                                                     |                                      | \$                     |
| Long Gully Creek Culvert.....                       | Mathinna Main Road.....              | 100 012                |
| Rumney Creek Culvert.....                           | Tunnack Main Road.....               | 103 938                |
| Concrete Median Barriers—Supply of p.c. units ..... | Launceston Southern Outlet Road..... | 112 336                |
| Stock Underpasses .....                             | Oatlands Bypass.....                 | 133 224                |
| Risdon Brook Culvert.....                           | Shones Corner .....                  | 156 248                |
| Redwater Creek Bridge.....                          | Railton Main Road.....               | 182 389                |
| Inglis River Bridge .....                           | Table Cape Road.....                 | 715 587                |
| Mount Pleasant Interchange Bridge .....             | Launceston Southern Outlet Road..... | 937 647                |
| Clyde River Bridge .....                            | Lake Highway .....                   | 958 680                |
| Bowen Bridge .....                                  | Goodwood Main Road.....              | 46 733 078             |

#### **BOWEN BRIDGE**

This well reported bridge was officially opened to traffic on 23 February 1984 by the Prime Minister, the Hon. R. J. L. Hawke, AC, MP

#### **CLYDE RIVER BRIDGE—BOTHWELL**

This seven span, 153 m long bridge and its associated road embankment approaches were officially opened to traffic on the 18 January 1984.

#### **INGLIS RIVER BRIDGE—WYNYARD**

This three span, 72 m long bridge was officially opened to traffic on the 13 April 1984. It replaces the last of a series of timber bridges on the road to Table Cape.

#### **MOUNT PLEASANT UNDERPASS**

This two span structure was completed by the end of the year except for the rock protection to the spill-through batters at the abutments.

Opening of this underpass will coincide with the opening of the Launceston Southern Outlet Road.

#### **BASS HIGHWAY—OLD SURREY ROAD TO CHASM CREEK**

Major works on this project were completed during the year and this section of the highway was opened to four lane traffic. Minor works in the form of permanent island construction and landscaping will be completed in 1984-85.

#### **CHANNEL HIGHWAY—O'BRIENS HILL TO NICHOLLS RIVULET MAIN ROAD TURNOFF**

Reconstruction and alignment improvements over this section were completed.

#### **EAST TAMAR HIGHWAY**

A corner near the Bell Bay Power Station was realigned and reconstructed.

#### **HOBART SOUTHERN OUTLET ROAD—ZOMAY AVENUE TO DAVEY STREET**

Earthworks and pavement to form the new carriageway have been completed and only await the extension of works to Macquarie Street to be finished before final re-routing of traffic.

#### **HUON HIGHWAY**

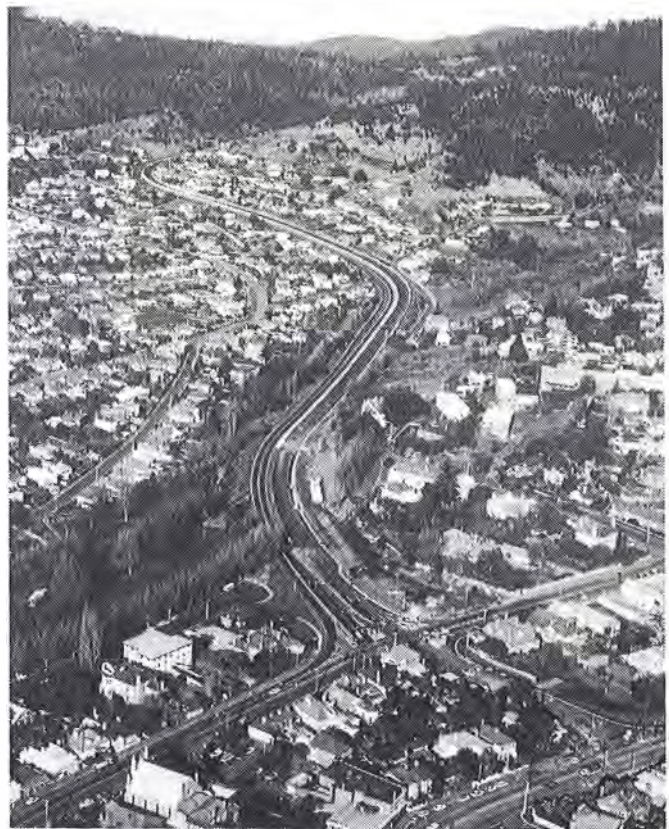
##### **Huonville to Swamp Road**

Reconstruction was completed.





*Bass Highway—Old Surrey Road to Chasm Creek*



*Hobart Southern Outlet Road—Zomay Avenue to Davey Street*





*Huon Highway—Dip Road to Grove Reconstruction  
at Bullock Hill*



*Lake Highway—Breona to Stoney Creek*





*Henty Main Road—West Coast Zeehan to Henty River*



*Illawarra Main Road—Deviation at Longford*





*Bowen Bridge—Dowsings Point showing the site of the former Bailey Bridge*



*Huon Outlet Road—Extension from Sandfly to Vines Saddle*



**South Franklin to Castle Forbes Bay**

Reconstruction was completed.

**LAKE HIGHWAY—BREONA TO STONEY CREEK**

Reconstruction of 9.5 km was completed, including 4 km of sealing.

**TASMAN HIGHWAY****Scottsdale to Ringarooma Road**

The remaining 4 km section to Ringarooma Road was completed.

**Scottsdale Township**

King Street, Scottsdale was reconstructed and resurfaced for a distance of 1.2 km west of the railway level crossing.

**Waverley to Nunamara**

Reconstruction of the section between 6.5 km and 17.7 km from Launceston was completed and included improvements to curves 3 km in length.

**Waverley Hill**

Reconstruction and improvements were carried out by the Municipality of St Leonards.

**Triabunna to Little Swanport**

Reconstruction was completed and a flush seal will be applied during 1984-85.

**HENTY MAIN ROAD**

Reconstruction and sealing of 25 km from Zeehan to the Henty River Bridge was completed.

**ILLAWARRA MAIN ROAD—DEVIATION AT LONGFORD**

This project was completed and opened to traffic in September 1983.

**MAJOR WORKS IN PROGRESS****Forth River Bridge**

As part of the continuing program to upgrade the Bass Highway to a dual carriageway, works commenced in September 1983 on the construction of this five span 137 m long bridge. Completion of the bridge is programed for December 1984.

All the piles have been driven, the abutments and twenty precast prestressed beams have been completed and work is proceeding on the construction of the piers and erection of the first span of beams.

**Glen Dhu Overpass**

Work continued on this two span bridge throughout the year. The substructure is completed and arrangements are in hand to erect the precast beams. Work has also started on preparing the spill-through batters at the abutments for placing the exposed aggregate paving slabs, which have already been manufactured.

**Wilmot Street Overpass**

Work commenced on this three span overpass structure with associated approach roadworks in the centre of Burnie. Completion is expected in early 1985.

Construction of the piers has been completed and the erection of the reinforced earth panels and associated earthworks are at an advanced stage.

**Dowsings Point Bailey Bridge**

Demolition work started in April 1984 and is expected to be completed by October 1984.



*Launceston Southern Outlet—Shamrock Street to Strathroy*



*Midland Highway—Bridgewater Bypass*

### **Velodrome Access Bridge**

This two span bridge is 48 m long and has an overall width of 13.7 m with a footpath on one side and a roadway width of 10.8 m. The substructure consists of reinforced concrete abutments founded on steel universal piles and a pier with a single column founded on a spread footing.

The superstructure comprises two spans of seven post-tensioned I beams with a reinforced concrete deck.

Construction commenced in June 1984 and the bridge is expected to be completed early in 1985. It will provide access for traffic to the Velodrome over the future Prospect Bypass.

### **Leith Rail Underpass**

This underpass comprises a single span structure adjacent to the existing railway bridge at Leith and is part of the duplication of the Bass Highway. Because of the extreme skew, the length of the bridge is 31 m with a clear width between abutments of 5.6 m.

The superstructure consists of pretensioned concrete beams with in situ concrete topping and two precast post-tensioned concrete edge beams. Reinforced earth walls retain the approach earthworks on which the reinforced concrete abutments are supported. Construction commenced in June 1984 and the underpass is expected to be completed in early 1985.

### **BASS HIGHWAY**

#### **Burnie Stage 'B'—North Terrace**

The duplication of 500 m of the highway along North Terrace was completed in May 1984 with landscaping to be completed during 1984-85.

### **Stanley to Smithton**

Reconstruction and sealing of 5 km of the highway west of the Stanley turnoff was completed.

### **HOBART SOUTHERN OUTLET ROAD—OLINDA GROVE TO ZOMAY AVENUE**

Earthworks commenced on widening from Zomay Avenue to Olinda Grove and the Proctors Road Deviation.

### **HUON OUTLET ROAD—EXTENSION FROM SANDFLY SECONDARY ROAD TO VINCES SADDLE**

Major earthworks and drainage over the whole route from Sandfly Secondary Road to Kylami Corner were substantially completed. The first layer of sub-base was completed from Sandfly Secondary Road to Krauses Road.

### **LAUNCESTON SOUTHERN OUTLET ROAD—SHAMROCK STREET TO STRATHROY**

Pavement works were substantially completed except for the Glen Dhu Connector and the Midland Highway junction. Asphalt and landscaping works were still in progress at the end of the financial year.

### **LYELL HIGHWAY—NEW NORFOLK TO GREтна**

Reconstruction continued westward from Hayes and the section from the Apple Pip Deviation to Puzzlegate Creek was constructed to primer seal stage. Construction to sub-base level was completed from Puzzlegate Creek to Plenty Curves and earthworks were commenced on the section from Plenty Curves to the Belmont Deviation.

### **MIDLAND HIGHWAY**

#### **Oatlands Bypass**

Earthworks were completed to formation level and drainage works are nearing completion.

### **Bridgewater Bypass**

Earthworks were completed and the first layer of sub-base laid. Construction of the new Weily Park Access was completed and work commenced on the East Derwent Highway junction.



**WEST TAMAR HIGHWAY**

Work commenced on the reconstruction of the West Tamar Highway between Cormiston Creek and Legana and was well advanced by the end of the financial year. The section between Danbury Park Road South and the Industrial Estate was completed with a new wide pavement.

**BRUNY MAIN ROAD**

Reconstruction between Adventure Bay and the Lennon Main Road turnoff continued and 1.9 km was completed to sub-base level and 3.17 km to formation level.

**LAKE LEAKE MAIN ROAD**

Reconstruction commenced between 28.8 km and 33 km from Campbell Town with 4.2 km being sealed. A further 4.7 km between 20.5 km and 25.2 km from Campbell Town which was reconstructed in 1982-83 was also sealed.

Lengths of approximately 1 km at each end of the road were reconstructed by the Glamorgan and Campbell Town Councils.

**MOLE CREEK MAIN ROAD**

Reconstruction of 7.5 km from Deloraine to the Needles commenced in July 1983.

**MATHINNA SECONDARY ROAD**

Reconstruction continued with earthworks and gravelling being virtually completed to the cross-roads at Mathinna. A further 6.63 km was sealed.

**COLES BAY TOURIST ROAD**

The 3 km section just north of Coles Bay which was reconstructed in 1982-83 was sealed and reconstruction and gravelling were carried out over an additional 2 km.

**CRADLE MOUNTAIN TOURIST ROAD**

Reconstruction of 7.8 km was completed during the financial year and a further 5 km commenced.

**ROAD MAINTENANCE**

The standard of road maintenance has continued at a satisfactory level. It was very noticeable that overseas on shoulders and contrasting colour shoulder seal has resulted in a decrease of seal edge breaks and shoulder maintenance.

**BITUMINOUS SURFACING**

Details of the bituminous works undertaken are shown in Annexure C.

**BRIDGE MAINTENANCE****BRIDGEWATER BRIDGE**

Major maintenance carried out on the bridge during the year included refastening and construction of a new form of pavement on the metal decking of the liftspan. The work, which was carried out over a five week period and required closing of the bridge to one lane of traffic, was made necessary by progressive failure of the deck fasteners used previously, and break-up of the asphaltic surfacing due to the combination of loose decking and water penetration. The new pavement includes a membrane which, it is expected, will enable it to better withstand flexure and also provide waterproofing qualities. Other works included completion of fixing of timber sheeting to the new protective fenderwork in the navigation channel, and painting of a further two approach spans at the southern end of the bridge.

Liftspan openings for the year totalled 550. These were required for:—

|                              |            |
|------------------------------|------------|
| Newsprint vessels .....      | 425        |
| Ferry and cruise boats ..... | 14         |
| Private pleasure craft ..... | 89         |
| Maintenance purposes .....   | 22         |
| TOTAL .....                  | <u>550</u> |

These figures represent a decrease of 241, or 30 per cent over the previous year, mostly in the newsprint traffic. A brief increase in weekend use of the liftspan by private pleasure craft was noted after the opening of the Bowen Bridge, but this is not expected to be sustained.

The bridge continues to give problems due to deterioration and malfunction of machinery and control equipment, much of which is becoming difficult to repair. A lot of the deterioration is attributed to the high level of vibration on the structure resulting from the dynamic effects of heavy, high speed road vehicles and a general increase in train loadings. It was hoped that with the opening of the Bowen Bridge there would be a reduction in the number of heavy vehicles using Bridgewater, but this has not been significant. With the imminent opening of the Bridgewater Bypass the problem could be aggravated due to higher vehicle speed. Imposition of a load limit on the bridge may become necessary in order to prolong its useable life.

#### **TASMAN BRIDGE**

Only minor structural maintenance work was carried out during the year. This mainly comprised installation of fasteners of an improved type for securing of steel footway, plates and modifications to roadway scuppers to increase the strength of the upper edge of the opening against vehicle impact.

One of the recommendations of the 1980 Atkinson-Edmonson Report on navigation in the vicinity of the Tasman Bridge was to provide instrumentation to enable the river currents in the region of the navigation span to be monitored, and the information passed to ships' pilots. Accordingly, under the direction of the Tasman Bridge Liaison Committee, a consultant in oceanography was engaged to undertake an on-site investigation and advise on suitable equipment. The Consultant's report has been received and it is expected that tenders for the supply and installation of the instruments will be called this year.

#### **DENISON CANAL BRIDGE**

Maintenance of the bridge and canal primarily consisted of resheeting of the timber fendering which protects the bridge piers, and the commencement of measures to protect and reinstate the canal banks from erosion.

Progressive erosion of the banks has been occurring ever since the canal was excavated at the beginning of the century, and has now reached the stage where it is encroaching upon property boundaries. The protective work which was carried out involved the placing of selected rock at the top of the bank, backfilling and battering the top of the bank. Approximately 150 linear metres was treated in this manner, and its performance will now be monitored to determine the effectiveness of the method.

Further painting of the bridge which has been scheduled was deferred in lieu of the bank protection work, and will now be carried out in the coming year.

Vessels passing through the canal in 1983-84 totalled 1 302, an increase of 116 on the previous year. Agreement has been reached with the Marine Board of Hobart on a new scale of charges for vessels using the canal as it is nearly thirty years since the last review.

#### **JETTIES, SLIPWAYS & FISHING FACILITIES**

Major works undertaken were as follows:—

##### **Bruny Island Ferry Terminals**

With the new terminals at Kettering and Roberts Point operational, the old terminals at Barnes Bay and Kettering became redundant. Demolition of the Barnes Bay terminal commenced towards the end of the financial year and is expected to be completed in the first half of 1984-85. The old terminal at Kettering is to be taken over by Transport Tasmania for use as a maintenance and lay up berth.

##### **BRID RIVER JETTIES**

After the design and the preparation of plans, work was undertaken during 1983-84 on the extension of this jetty by approximately 100 m to provide additional berthing space for fishing vessels and to compensate for the demolition of most of the left hand jetty which had no road access and was in very poor condition. An amount of \$86 000 was expended on this work during 1983-84 and completion is anticipated early in 1984-85 at an additional cost of approximately \$50 000.

### **BICHENO LANDING STAGE**

Widening of the landing stage by an average of 2 m in order to increase its effectiveness as a fishing facility was largely completed during 1983-84 at a cost of \$33 600. Completion will be early in 1984-85 at an additional cost of approximately \$20 000.

### **PIRATES BAY JETTY**

After the design and preparation of plans, the construction of a new timber jetty at Pirates Bay commenced. The new jetty is 55 m in overall length and 4 m wide which is a significant improvement on the original jetty. This work was almost completed during 1983-84 at a cost of \$104 000 and will be finally completed early in 1984-85 at an additional cost of approximately \$25 000.

### **PORT CYGNET JETTY**

During 1983-84 the Department agreed to take over this Council jetty. New beams were placed to strengthen the deck and a low landing stage was constructed. Expenditure on this work was \$8 000. This jetty plays an important part in the boating activities in the area and its listing as a State Jetty will be of benefit to the Municipality.

### **LADY BARRON SLIPWAY**

An amount of \$14 600 was expended on miscellaneous repairs to cradles, haulage gear and road access to improve the safety and efficiency of this slipway.

One million dollars was allocated during 1983-84 for the following works that are part of the Government's program of upgrading of fishing ports and are generally in accordance with the joint Commonwealth/Tasmanian study of Tasmanian fishing ports.

### **ST HELENS**

#### **Georges Bay Breakwater Walls Model Study**

This investigation is being undertaken by Professor D. Foster (a recognised authority in this field), Director of the Water Research Laboratory of the University of New South Wales. The ultimate object is to provide breakwater walls as an extension of training works already completed in order to stabilise the entrance channel and to provide safe navigation over the sand bar. Preliminary investigation undertaken during 1983-84 at a cost of approximately \$55 000 established the feasibility of such works and it is intended to proceed during 1984-85 with the construction of a hydraulic model of the walls and the assessment of the effects of varying sea conditions.

#### **Georges Bay Training Wall**

Periodic observations involving site survey, site inspection and aerial photography were continued as a means of monitoring the effects of the training wall and the complex sand movements which occur at the site.

This wall has been progressively constructed since 1969 to train the navigation channel in the inner delta on the bay side of the wall. It has been successful and it will eventually be integrated with the proposed breakwater walls.

During 1983-84 the wall was further extended by some 125 m at a cost of \$46 000. The total length of the wall is now 475 m. Erosion is still occurring in the Dora Point area opposite the seaward end of the wall, but this erosion is being closely monitored and will be considered in the hydraulic model study for the breakwater walls.

A severe storm in June 1984 caused some damage to the seaward end of the wall and a shortening in length. This is to be reinstated in order to preserve the structure.

#### **St Helens Berthing Jetties**

These jetties are situated on the filled in section of the township esplanade near the existing Hobart Marine Board Jetty. An approach road to the jetties was constructed by the Department at a cost of approximately \$13 000, which included some additional filling.

The construction of the two berthing jetties for fishing vessels began in 1983-84 with the work being designed and executed by the Hobart Marine Board on behalf of the Government. The jetty structures consist of a 3 m wide reinforced concrete deck on timber piles and will be some 90 m each in length when completed. The jetties were virtually completed to approximately 72 m in length





*St Helens—Georges Bay Training Wall*



*St Helens—Berthing Jetties*



each during 1983-84 at a cost of approximately \$327 000. Construction was halted at this stage because the Marine Board had to cease operations in order to service their pile driving plant. Construction is expected to recommence early in 1984-85 for completion of the jetties to 90 m in length. These jetties are providing a much needed berthing facility at the township.

### **Ablution Block**

The construction of an ablution block was commenced on the esplanade near the berthing jetties to provide an amenity for the crews of vessels and for the public generally.

Toilets, showers and general washing facilities are being provided, with hot and cold water. This was largely completed in 1983-84 at a cost of approximately \$40 000. Completion is anticipated early in 1984-85 at an additional cost of approximately \$10 000.

### **Port Plan**

In order to assist future overall planning in the extensive area available in Georges Bay and to provide for the orderly development of the port, particularly for fishing facilities, a port plan was commissioned and produced in April 1984 as the 'St Helens Port Development Plan'.

### **PORT OF STANLEY**

This port is under the control of the Circular Head Marine Board, but significant Government assistance has been provided over the years, particularly in regard to fishing facilities. A Consultant was commissioned to produce a port plan for the future orderly development of the Port of Stanley and also to produce design and details for the reconstruction of a section of the main foreshore wharf for the berthing of deep draft trawlers. This reconstruction is being undertaken by the Department with \$48 000 being expended in 1983-84. Completion is expected in 1984-85 for an additional amount of approximately \$90 000.

### **CURRIE HARBOUR**

#### **Breakwater Investigation**

Because of the dangers to fishing vessels at Currie, or on the West Coast of King Island during westerly storms, a preliminary investigation was undertaken by a Consultant during 1983-84 into the provision of a breakwater for Currie Harbour. This preliminary study established the feasibility of a breakwater and indicated that a greater in-depth study will be necessary in order to accurately determine wave heights and forces and to design a breakwater with an appropriate factor of safety against failure.

### **LADY BARRON PORT**

#### **Wharf Improvements and Navigation Aids**

In order to improve safety of navigation, the Port of Launceston Authority on behalf of the State Government investigated, designed and proceeded to install a system of navigation aids on the eastern approaches. These consist of lead-in beacons and marks with up to ten nautical mile daylight range and improvements to local wharf leads to assist berthing. Approximately \$66 600 was expended on this work during 1983-84.

To improve berthing for fishing vessels the Port of Launceston Authority on behalf of the State also designed and commenced construction of a 30 m timber extension of the main wharf and also undertook the construction of a low landing stage and various improvements to the fendering, etc. Approximately \$116 000 was expended on this work during 1983-84.

All of the foregoing works are progressing well and will be completed in the first half of 1984-85.

### **TRIABUNNA SLIPWAY**

An upgrading of this slipway comprising an extension of the underwater ways by 18 m, a new winch rope, replacing two of the timber cradles with four new all steel cradles, modifications to the two remaining timber cradles and the casting of two reinforced concrete apron slabs to improve the working area began and the work was well advanced with \$127 000 being expended in 1983-84. This work should be completed early in 1984-85 with a further expenditure of approximately \$74 000.

## **SPRING BAY DREDGING STUDY**

In order to improve the passage over the length of Spring Bay for fishing boats making for Charles Street Jetty at Triabunna, a study for the dredging of the channel to a depth of approximately 3 m below low water level (present depth is approximately 1.5 m below low water) was undertaken by the Consultant. As a result of this study, further engineering investigations are desirable before any dredging is commenced. In particular more survey information is required, investigation of the geology of the rock strata that will have to be removed to provide a turning basin near the jetty, the disposal of spoil from the dredging and the effect of proposals for a marina in the vicinity will require investigation and further study.

## **PORT OF STRAHAN**

### **Ablution Block**

Towards the end of 1983-84 work commenced on an ablution block for fishermen and users of the slipway at Strahan. A concrete masonry building is being provided with good quality vandal-proof fittings, showers and hot and cold water. This work will be completed early in 1984-85, costing approximately \$80 000.

### **Slipway Upgrading**

The upgrading of this slipway consists of the manufacture and installation of two steel cradles and associated items and the extension of the reinforced concrete slab to cover the whole of the working area. Most of this work was completed in 1983-84, at a cost of \$59 000. Completion will be early in 1984-85 for total cost of approximately \$74 000.

### **Southport Boat Ramp**

As an aid to both fishing and recreational boating activities in the area the existing sub-standard boat ramp at Southport was replaced with a new reinforced concrete ramp of significantly improved design and increased capacity. An improved access road and car parking area were also provided. Both planning and construction were undertaken by the Department at a cost of \$32 500.

## **INVESTIGATIONS AND MATERIALS TESTING**

Route feasibility and design investigations were carried out on the following projects:—

- Bass Highway—Prospect to Hadspen
- Bass Highway—Don Hill to Forth River
- Huon Highway—Vinces Saddle to Huonville
- Bellerive By-pass
- West Tamar Highway—Cormiston Creek to Legana
- West Tamar Highway—Muddy Creek to Exeter
- Lilydale Main Road—Prossers Forest Road to Lilydale
- Launceston Southern Outlet
- Hobart Southern Outlet—Proctors Saddle Interchange

Investigations for foundations for fourteen bridge structures were carried out and also three building foundations were investigated on behalf of the Department of Construction.

## **LANDSCAPING**

Main works designed by the Department have been in connection with the Midland Highway, the Bridgewater and Oatlands By-passes and also the Bass Highway between Old Surrey Road and Chasm Creek.

Three large projects have involved the use of consultant landscape architects, namely, the Bowen Bridge, the Launceston Southern Outlet Road and the Burnie Freeway System Stage 'B'.

The actual plantings of the Bowen Bridge and its road approaches were carried out by the Department.



## CONSTRUCTION, PLANT AND WORKSHOPS

### GENERAL

The Plant Division, which incorporates the Workshops at Moonah, Launceston and Ulverstone, provides plant and workshop facilities for the Department's construction and maintenance activities on roads and bridges.

The income from plant hire amounted to \$9 856 145, an increase of 12.1 per cent over the previous year.

Hire charges paid directly to outside owners and contractors amounted to approximately \$11.4 m.

### PLANT OPERATIONS

An amount of \$1.36 million was spent on the purchase of new equipment, mainly the replacement of 2 M20 size dozers, 3 maintenance graders, medium trucks and light vehicles.

### TRAINING AND DRIVER TESTING

During the year 315 people, including 154 from other Departments, were tested and issued with D.M.R. driving permits.

One-day defensive driving seminars were held at Moonah, Launceston and Ulverstone with a total attendance of eighty-four.

### VEHICLE ACCIDENTS

The frequency of vehicle accidents decreased during 1983-84 from 0.48 accidents per 100 000 km to 0.33 in the current year. Personal injury has been negligible and few accidents resulted in major damage.

### APPRENTICES

Participation in the Hydro-Electric Commission's training scheme was again made available to first year metal trades apprentices from Moonah.

The number of apprentices currently undergoing training in the Department's workshops is forty-nine made up as follows:—

|                  |    |
|------------------|----|
| Moonah .....     | 20 |
| Launceston.....  | 18 |
| Ulverstone ..... | 11 |
| Total .....      | 49 |

### DEPOTS AND WORKSHOPS

The Workshop Production Account recorded an annual turnover of \$5.965 m.

Signs to the value of \$269 000 were manufactured by the Moonah Sign Shop.

Major works carried out during the year, apart from the main function of plant repairs, consisted of the manufacture and installation of cradles for Triabunna and Strahan Slipways.

Depot Improvements included:—

- Construction of a flammable liquids store for the Materials and Research Laboratory at the South-East District Office.
- Annex for Moonah Carpenters Shop.
- Completion of Oil Store for the North-East Automotive Workshop.
- Erection of security fence at North-East Depot Steel Yard.

### FINANCIAL STATEMENTS

The Plant Division accounting operates with an April to March financial year. The Division trading account is the Road Construction Plant Suspense Account which must be kept as required by Section 6 of the Roads and Jetties Act 1935.

The Road Construction Plant Suspense Account financial statements for the period are reported in Annexure D.

## ADMINISTRATION

### GENERAL

The Department continues to operate with staffing resources below a satisfactory minimum level in a number of areas. The staff has responded in a commendable manner to all Government initiatives and the ever increasing demands for information and services.

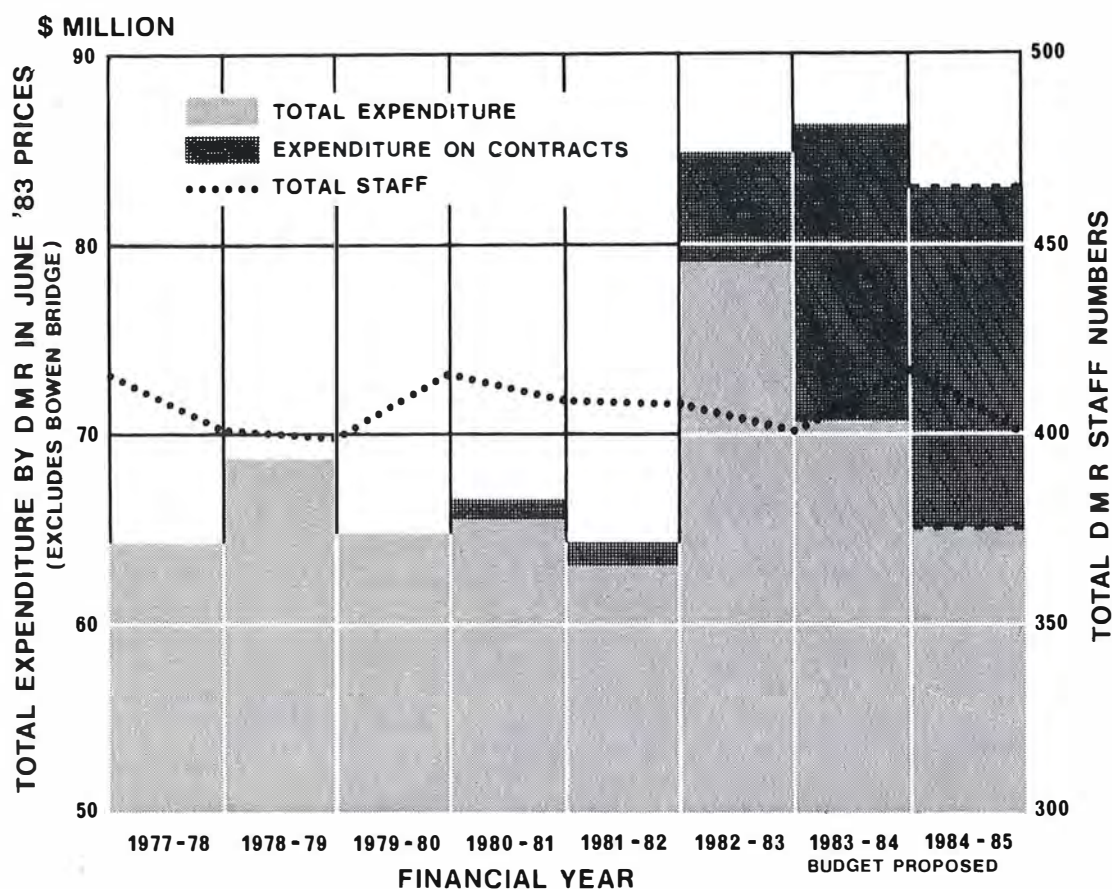
### STAFF

At 30 June 1984 there were 385 Public Service Act positions and 46 Public Works Construction Act positions on the Department's establishment and the actual number of staff employed was 373 Public Service Act staff and 44 Public Works Construction Act staff.

The composition of this staff was:—

| <i>Public Service Act Staff</i>                                                       |            |
|---------------------------------------------------------------------------------------|------------|
| Administrative Officers, Accountants and Clerical Staff .....                         | 114        |
| Professional Engineers .....                                                          | 78         |
| Surveyors .....                                                                       | 17         |
| Scientific Officers, Technical Officers, Engineering Assistants and Technicians ..... | 69         |
| Draftsmen .....                                                                       | 53         |
| Typists and Other Keyboard Classifications .....                                      | 29         |
| Other Classifications .....                                                           | 13         |
| <b>Total Public Service Act Staff .....</b>                                           | <b>373</b> |
| <i>Public Works Construction Act Staff</i>                                            |            |
| Survey Assistants .....                                                               | 29         |
| Plan Printers .....                                                                   | 3          |
| Inspectors .....                                                                      | 11         |
| Other Classifications .....                                                           | 1          |
| <b>Total Public Works Construction Act Staff ....</b>                                 | <b>44</b>  |

The distribution of staff to the various locations of the Department was as follows:—



|                                                   |     |
|---------------------------------------------------|-----|
| <i>Public Service Staff</i>                       |     |
| Head Office, Murray Street, Hobart .....          | 212 |
| South-East District Office, Derwent Park .....    | 32  |
| North-East District Office, Launceston .....      | 37  |
| North-West District Office, Ulverstone .....      | 34  |
| Central Workshops and Stores, Moonah .....        | 34  |
| Materials and Research Laboratory, Derwent Park . | 24  |
| Total .....                                       | 373 |
| <i>Public Works Construction Act Staff</i>        |     |
| Head Office, Murray Street, Hobart .....          | 4   |
| South-East District Office, Derwent Park .....    | 13  |
| North-East District Office, Launceston .....      | 12  |
| North-West District Office, Ulverstone .....      | 9   |
| Central Workshops and Stores, Moonah .....        | 3   |
| Materials and Research Laboratory, Derwent Park . | 3   |
| Total .....                                       | 44  |

Senior Appointments during the year included:—

Mr L. J. Baily was promoted to the position of Director of Main Roads;  
 Mr P. J. Wettenhall was appointed to the position of Deputy Director;  
 Mr A. J. Callaway was promoted to the position of District Engineer;  
 Mr G. J. Donnelly was promoted to the position of Senior District Surveyor;  
 Mr W. A. Fox was promoted to the position of Supervisor;  
 Mr B. Lam was promoted to the position of Construction Engineer;  
 Mr I. D. Cooper was promoted to the position of Senior Engineer;  
 Miss K. L. Hutton was promoted to the position of Records Clerk-in-Charge;  
 Mr J. P. J. Boland was promoted to the position of Engineer;  
 Mr A. T. Bouchard was promoted to the position of Mechanical Engineer;  
 Mr J. J. Dwyer was promoted to the position of Chief Surveyor;  
 Mr E. J. Barrenger was promoted to the position of Division Engineer.

The following long-serving officers retired or resigned during the year:—

Mr H. K. Hannan, Inspector—47 years service;  
 Mr D. A. Wharmby, Principal Engineer, Construction and Programing—44 years service;  
 Mr J. Hollingsworth, Stores Officer—44 years service;  
 Mr F. E. G. Miller, Surveyor—42 years service;  
 Mr L. B. Rayner, Engineer—37 years service;  
 Mr D. Donovan, Stores Supervisor—35 years service;  
 Mr W. C. Jones, Chief Surveyor—33 years service;  
 Mr E. J. Davidson, Supervisor—32 years service;  
 Miss J. P. Shirley, Records Clerk—30 years service;  
 Mr J. L. Clougher, Executive Officer—30 years service;  
 Mr D. G. Gates, Clerical Assistant/Driver—30 years service;  
 Mr L. Nation, Clerk—29 years service;  
 Mr F. A. Rossington, Supervisor—28 years service;  
 Mrs V. K. Simsons, Clerical Assistant—28 years service;  
 Mr D. L. Rouse, Survey Assistant—24 years service;  
 Mrs M. D. Gray, Machinist—15 years service.

## STUDY COURSES AND STAFF DEVELOPMENT PROGRAM

Including those officers studying work-related subjects in tertiary establishments there are a total of fifteen persons receiving time off for study purposes.

There are no persons currently holding a University Scholarship.

## INDUSTRIAL

Wages remained static throughout the year as a result of the wage pause.



As at 30 June 1984 the number of employees engaged in workshop and field operations were:—

|                                                            |       |
|------------------------------------------------------------|-------|
| Workshops and depots .....                                 | 231   |
| Construction and Maintenance of Roads and<br>Bridges ..... | 913   |
| Total .....                                                | 1 144 |

Retirements for the year totalled fifty-one, and a number of these served the Department for many years.

*Retirements—Age or Voluntary—*

- G. W. Briggs, Senior Lift Span Operator—45 years service.
- N. J. Evans, Foreman—36 years service.
- E. V. Tole, Foreman—36 years service.
- E. L. Pulford, Patrolman Lake Highway—35 years service.
- S. Bursac, 2nd Class Machinist—33 years service.
- O. Henry, Foreman—30 years service.
- J. R. Powe, Foreman—28 years service.
- C. J. Garwood, Foreman—27 years service.

*Retirements due to Ill Health—*

- G. E. F. Bourke, Foreman—37 years service.
- D. Furlani, Auto/Electrician—33 years service.
- A. Jeschke, Foreman—30 years service.
- H. C. Bryan, Carpenter—30 years service.
- F. J. Smith, Foreman—29 years service.
- V. G. Pyke, Plant Operator—29 years service.
- E. A. Smith, Labourer—27 years service.
- A. Zordon, Motor Mechanic—26 years service.
- \*E. Brivkalns, Truck Driver—33 years service.
- \* Killed in motor vehicle accident going home from work.*

## WORKERS' COMPENSATION

The cost and incidence of common law claims resulting from workers' compensation cases are of major concern.

The following payments under the Workers' Compensation Act were made during the year.

|                           |                     |
|---------------------------|---------------------|
|                           | \$                  |
| Weekly Payments .....     | 186 792.70          |
| Medical Expenses .....    | 89 689.30           |
| Lump Sum Settlement ..... | 72 631.00           |
|                           | <u>\$349 113.00</u> |

## INDUSTRIAL SAFETY

The 'Accident Prevention Program' was continued throughout the Districts and Depots in the Department over the 1983-84 period.

First Aid courses were held during the year with some ninety employees attending and gaining awards ranging from the basic certificate to 'Medallion' and 'Voucher' levels.

A Crane Chaser's Course was conducted in the Department's North-West District and it is proposed to hold similar courses in the other Districts.

The Tasmanian Fire Service (Training Division) conducted the L.P. Gas and Fire Fighting Equipment Course for the Department in the Hobart and Launceston areas. These courses will prepare employees for the change over from oil firing to L.P. Gas firing of bituminous products for sealing purposes.

The lost time accident rate for the Department again showed a downward trend with accidents reduced from 168 in 1982-83 to 162 for 1983-84. Three bridge gangs gained the 'National Safety Council of Australia, Safety Plaque'.

## PROPERTY ACQUISITIONS

During 1983-84 a total of 194 acquisitions were completed, 189 were commenced and, at the end of the financial year, 301 acquisitions were in progress. Ninety-eight of the acquisitions in progress were subject to compulsory process compared with ninety-five at the end of the previous year. Expenditure on property acquisitions for the year was \$5 867 711 compared with \$6 141 663 for the preceding year. Included in this total was an amount of \$2 244 211 for National Highways Projects.

The major areas of expenditure included the purchase of properties affected by the construction of the Launceston Southern Outlet Road, Burnie Expressway, Midland Highway, Bass Highway (Don Hill to Ulverstone) and the Tasman Highway Extension to Davey Street. Many minor property acquisitions resulted from the reconstruction of the Huon Highway, Channel Highway, Lyell Highway, Tasman Highway and the Bass Highway (Wynyard to Boat Harbour).

The Department has now completed the purchase of nearly all the properties required for the construction of the Launceston Southern Outlet Road and the Burnie Expressway and in most cases the sites have been cleared to enable roadworks to commence.

## CONTRACTS

The following contracts were entered into during 1983-84 (excluding building demolitions):—

| <i>Contract No.</i> | <i>Description</i>                                                                                                                     | <i>Contract Price</i> |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
|                     |                                                                                                                                        | \$                    |
| A/R-026             | Hobart—Southern Outlet Road Zomay Avenue to Davey Street Stage 1—Construction.....                                                     | 675 955-00            |
| B-N/R-036           | Midland Highway—Bridgewater Bypass Stage 1—Earthworks and Drainage.....                                                                | 369 190-00            |
| B-N/R-040           | Bass Highway—Burnie Stage B North Terrace—Reconstruction ..                                                                            | 936 854-42            |
| R-N/B-042           | Forth River Bridge—Bass Highway.....                                                                                                   | 1 577 886-98          |
| B-N/B-043           | Willmot Street Overpass—Burnie .....                                                                                                   | 1 021 964-00          |
| R-N/B-044           | Leith Rail Underpass—Bass Highway.....                                                                                                 | 511 479-00            |
| B-A/B-045           | Whitewater Creek Culvert—Hobart Southern Outlet Road—Extension .....                                                                   | 135 540-00            |
| B-A/R-047           | Algona Main Road—Blackmans Bay to Channel Highway—Construction, Stage 1.....                                                           | 1 882 000-00          |
| R-N/R-048           | Midland Highway—Oatlands Bypass—Road Construction.....                                                                                 | 2 057 115-00          |
| R-N/B-049           | Launceston Southern Outlet Road—Traffic Barrier Precast Units ..                                                                       | 122 916-00            |
| R-N/B-050           | Midland Highway—Oatlands Bypass—Stock Underpasses .....                                                                                | 143 401-00            |
| R-N/R-051           | Launceston Southern Outlet Road—Westbury Road to Strathroy—Pavement Construction.....                                                  | 2 395 324-00          |
| R-N/R-052           | Bass Highway—Don Hill to Forth River—Construction, Stage 1 ..                                                                          | 1 645 610-17          |
| B-A/R-053           | Lilydale Main Road—Prosser Forest Road to Underwood Deviation—Reconstruction .....                                                     | 1 003 896-74          |
| B-A/R-054           | Hobart Southern Outlet Road—Zomay Avenue to Davey Street—Traffic Barriers .....                                                        | 192 128-00            |
| B-A/R-055           | Royal Park Interchange—Road No. 3—Construction.....                                                                                    | 352 861-67            |
| B-NA/R-056          | Bass Highway—Burnie Stage B and ABRD Projects—Manufacture and Supply of Road Signs and Fittings .....                                  | 7 221-00              |
| B-N/R-057           | Midland Highway—Bridgewater Bypass—Retaining Wall at Bridgewater .....                                                                 | 45 162-00             |
| B-N/R-058           | Midland Highway—Bridgewater Bypass—Road Construction, Stage 2 .....                                                                    | 1 481 974-00          |
| R-N/R-062           | East Tamar Highway—Curve Improvements near Power Station ..                                                                            | 400 849-29            |
| R-N/B-063           | Williams Creek Culvert Extension—East Tamar Highway .....                                                                              | 74 074-00             |
| R-N/R-064           | Bass Highway—Wivenhoe to Chasm Creek—Asphalt Surfacing ..                                                                              | 138 330-00            |
| B-N/B-073           | Velodrome Access Bridge—Prospect Bypass .....                                                                                          | 652 661-49            |
| B-A/B-074           | Pipers River Bridge—Lilydale Main Road.....                                                                                            | 631 599-00            |
| R-N/R-079           | Bass Highway—Old Surrey Road to Chasm Creek—Asphalt Surfacing .....                                                                    | 212 940-00            |
| R-N/B-080           | Jinglers Creek Culvert—Midland Highway Strathroy .....                                                                                 | 190 162-00            |
| B-A/R-081           | Lyell Highway near Gretna—Pavement Strengthening and Associated Works.....                                                             | 411 025-00            |
| R-N/M-085           | Midland Highway—Melton Mowbray to Lovely Banks—Asphalt Surfacing .....                                                                 | 549 245-00            |
|                     | Launceston Southern Outlet Road—Urban Arterial Section—Glen Dhu-Shamrock Street to Westbury Road—Construction of Concrete Kerbing..... | 78 450-00             |
| R-S/E-394           | Bowen Bridge—Western Approach Road—Supply and Lay Asphalt .....                                                                        | 301 584-96            |

| <i>Contract No.</i> | <i>Description</i>                                                                                      | <i>Contract Price</i> |
|---------------------|---------------------------------------------------------------------------------------------------------|-----------------------|
|                     |                                                                                                         | \$                    |
| R/SE-395            | Tasman Bridge—Tow Truck Service .....                                                                   | Schedule of Rates     |
| R/SE-396            | Lyell Highway Lawitta—Asphalt Surfacing .....                                                           | 71 484-00             |
| B/NE-397            | Glen Dhu Overpass—Launceston Southern Outlet Road—Supply of Precast Paving Slabs and Facia Panels ..... | 19 205-00             |
| R/SE-399            | Tasman Bridge—Provision and Installation of Microcomputer Traffic Control .....                         | 66 675-00             |
| R/SE-1001           | East Derwent Highway—Shones Corner—Supply and Lay Asphalt .....                                         | 38 056-25             |
| RSE-1004            | Northern Outlet Road—Claremont Interchange and Arncliffe Road—Supply and Lay Asphalt .....              | 39 849-75             |
| R/SE-1005           | Tasman Highway—Midway Point West (Excluding Bridge)—Supply and Lay Asphalt .....                        | 73 702-80             |
| R/SE-1006           | Brooker Highway—Risdon Road Junction to Clearys Gates—Supply and Lay Asphalt .....                      | 175 006-17            |
| B-A/R-1007          | Hobart Southern Outlet—Zomay Avenue to Davey Street—Supply and Lay Asphalt .....                        | 60 522-02             |
| R-A/R-1008          | Hobart Southern Outlet Road—Davey Street—Macquarie Street—Supply and Lay Asphalt .....                  | 92 342-34             |
| R/NE-2001           | West Tamar Highway—Cormiston Creek to Legana—Relocation of 15 inch (375 mm) Water Main .....            | 49 500-00             |
| R/NW-3001           | Bass Highway—Wynyard Bypass—Supply and Lay Asphalt .....                                                | 94 874-50             |
| R/NW-3002           | Murchison Highway—Hellyer Gorge—Supply and Lay Asphalt ..                                               | 33 242-16             |
| R/NW-3003           | Murchison Highway—Wandle River Bridge Approaches—Supply and Lay Asphalt .....                           | 45 284-00             |
| R/NW-3004           | Port Sorell Main Road—Bass Highway to Pardoe Junction—Supply and Lay Asphalt .....                      | 61 465-60             |
| R/NW-3005           | Montagu Main Road—Duck River Bridge Approaches—Supply and Lay Asphalt .....                             | 24 996-30             |
| R/NW-3006           | Bass Highway—Forest Weighing Station to Long Hill (L.44 Mile Peg)—Supply and Lay Asphalt .....          | 236 067-96            |

## AGREEMENTS

Contracts below \$30 000 in value are usually the subject of a simplified form of contract termed 'agreements'. The following agreements were entered into during 1983-84:—

|                           | <i>Bridges</i> | <i>Sealing</i> | <i>Gravel</i> | <i>Others</i> | <i>Total</i> |
|---------------------------|----------------|----------------|---------------|---------------|--------------|
| North-West District ..... | ....           | 20             | 13            | 11            | 44           |
| North-East District ..... | ....           | 2              | 18            | 36            | 56           |
| South-East District ..... | ....           | 13             | 15            | 36            | 64           |
| Head Office .....         | 2              | 2              | 4             | 70            | 78           |
| Total .....               | 2              | 37             | 50            | 153           | 242          |

## STORES

The construction and plant stores requirements of the Department, managed through a decentralised stores system, with a principal store at the main workshop complex at Moonah and major branch stores at the District Offices in Launceston and Ulverstone were approximately \$2.4 m. The opening value of stores holdings was \$875 032 and the closing value at 30 June 1984 was \$980 150.

Period contract orders placed for mechanical parts totalled 5 760 with a further 6 820 orders placed for general items and materials. As well price/availability checks for over 6 500 items were made.

The introduction of a single system combining Plant Stores and Construction Stores and operating through the State Highway Trust Account has proven satisfactory.

## ACKNOWLEDGEMENT

I once again wish to express my appreciation to all the staff and employees of the Department for their efforts and co-operation in fulfilling an exceptionally heavy program of works ranging from routine to extremely complex projects.

The improvements to the road system are becoming most apparent and are attracting favourable public comment and all members of the Department are entitled to share in the satisfaction being expressed.

L. J. BAILY, *Director of Main Roads*



## ANNEXURE A

## LOAN FUND EXPENDITURE 1983-84

| 1982-83<br>\$    |                                                         | 1983-84<br>\$    |
|------------------|---------------------------------------------------------|------------------|
|                  | <i>Roads and Bridges—</i>                               |                  |
| ....             | Illawarra Main Road .....                               | 416 000          |
| ....             | Southern Outlet Road .....                              | 414 215          |
| ....             | Huon Outlet Road .....                                  | 1 297 080        |
| ....             | Tasman Highway, Scottsdale to Ringarooma Turnoff .....  | 300 000          |
| 973 500          | Huon Highway, Huonville to Geeveston .....              | 1 149 000        |
| 1 000 000        | Henty Main Road .....                                   | 1 100 000        |
| ....             | Refund to Consolidated Revenue for Administration ..... | 320 000          |
| <u>1 973 500</u> | Total (Roads and Bridges) .....                         | <u>4 996 295</u> |
|                  | <i>Other Works—</i>                                     |                  |
| 275 000          | Launceston Flood Protection Scheme .....                | 282 171          |
| 238 130          | Jetties and Facilities for Fishermen .....              | 250 000          |
| 2 482 842        | Bruny Ferry Terminals—Construction .....                | 53 705           |
| ....             | Upgrading of Fishing Ports .....                        | 1 000 000        |
| <u>2 995 972</u> | Total (Other Works) .....                               | <u>1 585 876</u> |
| <u>4 969 472</u> | Total (All Works) .....                                 | <u>6 582 171</u> |

## ANNEXURE B

## FINANCIAL ASSISTANCE TO LOCAL GOVERNMENT AUTHORITIES

| 1982-83<br>\$     |                                                                  | 1983-84<br>\$     |
|-------------------|------------------------------------------------------------------|-------------------|
|                   | <i>Direct Grants—</i>                                            |                   |
| 1 885 214         | Arterial Roads—Construction .....                                | 835 224           |
| 150 000           | Maintenance .....                                                | ....              |
| 5 827 159         | Local Roads—Construction .....                                   | 6 906 702         |
| <u>2 428 505</u>  | Maintenance .....                                                | <u>2 953 392</u>  |
| <u>10 290 878</u> | Total .....                                                      | <u>10 695 318</u> |
|                   | <i>Work on Council Roads Financed and Carried out by D.M.R.—</i> |                   |
| 2 203 383         | Repair and Renewal of Bridges .....                              | 2 358 998         |
| <u>386 828</u>    | Roadworks .....                                                  | <u>224 130</u>    |
| <u>12 881 089</u> | Total .....                                                      | <u>13 278 446</u> |

## ANNEXURE C

## BITUMINOUS SURFACING COMPLETED 1982-83 (km)

|                                   | Hot Bitumen Sprayed Seal |                    |                |                 |         |        |  |
|-----------------------------------|--------------------------|--------------------|----------------|-----------------|---------|--------|--|
| Road                              | Prime<br>and Seal        | Primer<br>and Seal | Winter<br>Seal | Flush<br>Reseal | Asphalt | Total  |  |
| South-East District—              |                          |                    |                |                 |         |        |  |
| Brooker Highway .....             | ....                     | ....               | ....           | ....            | 2.26    | 2.26   |  |
| Channel Highway .....             | ....                     | 1.10               | ....           | 8.83            | 0.91    | 10.84  |  |
| East Derwent Highway .....        | ....                     | ....               | ....           | 2.70            | 0.60    | 3.30   |  |
| Huon Highway .....                | ....                     | 4.15               | ....           | 6.62            | ....    | 10.77  |  |
| Lake Highway .....                | 1.25                     | ....               | ....           | ....            | ....    | 1.25   |  |
| Lyell Highway .....               | 2.12                     | 6.21               | ....           | 7.80            | 1.11    | 17.24  |  |
| Midland Highway .....             | 0.36                     | 0.43               | ....           | ....            | 5.94    | 6.73   |  |
| Southern Outlet .....             | 0.45                     | ....               | ....           | ....            | 2.96    | 3.41   |  |
| Tasman Highway .....              | ....                     | 5.14               | ....           | 4.07            | 2.30    | 11.51  |  |
| Fenton Main Road .....            | ....                     | ....               | ....           | 5.99            | ....    | 5.99   |  |
| Tunnack Main Road .....           | 0.25                     | ....               | ....           | ....            | ....    | 0.25   |  |
| Boyer Secondary Road .....        | ....                     | ....               | ....           | 2.53            | ....    | 2.53   |  |
| Ranelagh Secondary Road .....     | ....                     | ....               | ....           | 0.50            | ....    | 0.50   |  |
| Scotts Secondary Road .....       | ....                     | ....               | ....           | 4.14            | ....    | 4.14   |  |
| South Arm Secondary Road .....    | ....                     | ....               | ....           | 10.47           | ....    | 10.47  |  |
| North-West District               |                          |                    |                |                 |         |        |  |
| Bass Highway .....                | ....                     | ....               | ....           | 4.55            | ....    | 4.55   |  |
| Lake Highway .....                | 5.24                     | ....               | ....           | ....            | ....    | 5.24   |  |
| Murchison Highway .....           | ....                     | ....               | ....           | 6.30            | 2.14    | 8.44   |  |
| Zeehan Highway .....              | ....                     | ....               | ....           | 6.30            | ....    | 6.30   |  |
| Castra Main Road .....            | ....                     | ....               | ....           | 5.72            | ....    | 5.72   |  |
| Henty Main Road .....             | 25.00                    | ....               | ....           | ....            | ....    | 25.00  |  |
| King Island Main Road .....       | ....                     | ....               | ....           | 3.70            | ....    | 3.70   |  |
| Mole Creek Main Road .....        | ....                     | ....               | ....           | 10.66           | ....    | 10.66  |  |
| Montagu Main Road .....           | ....                     | ....               | ....           | ....            | 0.50    | 0.50   |  |
| Port Sorell Main Road .....       | ....                     | ....               | ....           | ....            | 1.85    | 1.85   |  |
| Railton Main Road .....           | ....                     | ....               | ....           | 6.50            | ....    | 6.50   |  |
| Waratah Main Road .....           | ....                     | ....               | ....           | 3.80            | ....    | 3.80   |  |
| North-East District—              |                          |                    |                |                 |         |        |  |
| East Tamar Highway .....          | ....                     | ....               | ....           | 3.80            | ....    | 3.80   |  |
| Midland Highway .....             | ....                     | ....               | ....           | 17.58           | 0.33    | 17.91  |  |
| Tasman Highway .....              | 4.20                     | ....               | 5.09           | ....            | 14.42   | 23.71  |  |
| Frankford Main Road .....         | ....                     | ....               | ....           | 0.50            | ....    | 0.50   |  |
| Lake Leake Main Road .....        | ....                     | ....               | 11.66          | 1.08            | ....    | 12.74  |  |
| Lilydale Main Road .....          | 0.46                     | ....               | ....           | ....            | ....    | 0.46   |  |
| Poatina Main Road .....           | ....                     | ....               | ....           | ....            | 12.54   | 12.54  |  |
| Mathinna Secondary Road .....     | 6.63                     | ....               | ....           | ....            | ....    | 6.63   |  |
| Pipers River Secondary Road ..... | ....                     | ....               | ....           | ....            | 2.30    | 2.30   |  |
| Rossarden Secondary Road .....    | ....                     | ....               | ....           | 8.23            | ....    | 8.23   |  |
| Coles Bay Tourist Road .....      | ....                     | ....               | 2.56           | ....            | ....    | 2.56   |  |
| Totals .....                      | 45.96                    | 17.03              | 19.31          | 127.82          | 54.71   | 264.83 |  |

The following works were also carried out by the Department on Classified and Unclassified Roads. Because of various pavement widths, junction areas, etc. quantities are shown rather than lengths:—

Bass Highway—Wivenhoe to Chasm Creek—47 221 m<sup>2</sup> Prime and Seal and 3 353 Tonnes Asphalt.

Bass Highway—Wynyard/Boat Harbour—41 072 m<sup>2</sup> Flush Reseal.

Bass Highway—Sisters Hills—23 552 m<sup>2</sup> Prime and Seal and Flush Reseal.

Bass Highway—Stanley/Smithton—72 439 m<sup>2</sup> Prime and Seal.

East Derwent Highway—2 645 m<sup>2</sup> Flush Reseal and 759 Tonnes Asphalt.

Hobart Southern Outlet—265 Tonnes Asphalt.

Launceston Southern Outlet—90 332 m<sup>2</sup> Winter Seal and 19 691 Tonnes Asphalt.

Lyell Highway—369 Tonnes Asphalt.

Tasman Highway—Waverley towards Nunamara—69 479 m<sup>2</sup> Flush Reseal.

West Tamar Highway—3 224 m<sup>2</sup> Winter Seal and 1 244 Tonnes Asphalt.

Elderslie Main Road—3 400 m<sup>2</sup> Primer Seal and 282 Tonnes Asphalt.

Goodwood Main Road—4 376 m<sup>2</sup> Primer Seal, 4 054 m<sup>2</sup> Flush Reseal and 5 412 Tonnes Asphalt.

Illawarra Main Road—1 512 Tonnes Asphalt.

Lady Barron Main Road—12 860 m<sup>2</sup> Flush Reseal.

Pieman River Power Development (for H.E.C.)—13 979 m<sup>2</sup> Prime and Seal and Double Seal.

## ANNEXURE D

ROAD CONSTRUCTION PLANT SUSPENSE ACCOUNT 1983-84  
INCOME AND EXPENDITURE STATEMENT

| Period<br>Ending<br>19.3.83<br>\$ |                                                                                  | Period<br>Ending<br>17.3.84<br>\$ |
|-----------------------------------|----------------------------------------------------------------------------------|-----------------------------------|
|                                   | <i>Income—</i>                                                                   |                                   |
|                                   | <i>Earnings—</i>                                                                 |                                   |
| 8 791 983                         | Plant Hire .....                                                                 | 9 856 145                         |
| 5 361 056                         | Workshop Charges .....                                                           | 6 065 648                         |
| 179 250                           | Other Income .....                                                               | 109 041                           |
| 87 161                            | Net Profit on Sale of Plant and Stores and Stocktaking Adjustments .....         | 159 473                           |
| <u>\$14 419 450</u>               | Total .....                                                                      | <u>\$16 190 307</u>               |
|                                   | <i>Expenditure—</i>                                                              |                                   |
| 6 460 621                         | Plant Operation and Maintenance .....                                            | 7 031 578                         |
| 5 261 947                         | Workshop Operations .....                                                        | 5 706 399                         |
| 1 272 399                         | Plant Depot Administration and Maintenance .....                                 | 1 639 129                         |
| 1 122 518                         | Provision for Depreciation of Plant, Equipment and Buildings .....               | 1 020 307                         |
| 402                               | Net Loss on Sale and Write-off of Plant Stores and Stocktaking Adjustments ..... | ....                              |
| ....                              | Provision for Insurances .....                                                   | 31 000                            |
| 14 117 887                        |                                                                                  | 15 428 413                        |
| 301 563                           | Excess of Income over Expenditure for Period .....                               | 761 894                           |
| <u>\$14 419 450</u>               | Total .....                                                                      | <u>\$16 190 307</u>               |

ROAD CONSTRUCTION PLANT SUSPENSE ACCOUNT 1983-84  
*Balance Sheet as at 17 March 1984*

| 1983<br>\$         |                                                                                                    | 1984<br>\$         |
|--------------------|----------------------------------------------------------------------------------------------------|--------------------|
|                    | <b>NATURE AND SOURCE OF FUNDS USED—</b>                                                            |                    |
|                    | <i>Funds provided by State Treasurer—</i>                                                          |                    |
|                    | Valuation of Plant and Equipment held at 30 June 1945 and Stock on Hand held at 30 June 1946 ..... | 194 607            |
| 194 607            | Loan Funds .....                                                                                   | 3 140 730          |
| 3 140 730          | Commonwealth Grant .....                                                                           | 6 769              |
| 6 769              | State Highways Trust Fund .....                                                                    | 326 897            |
| 326 897            | General Reserve for Increased Cost of Plant Replacement .....                                      | 2 712 803          |
| 2 564 788          | Accumulation Account .....                                                                         | 2 426 297          |
| 1 812 418          |                                                                                                    |                    |
|                    | <i>Current Liabilities—</i>                                                                        |                    |
| 98 238             | Sundry Creditors (Store) .....                                                                     | ....               |
| 336 725            | Accrued Expenses .....                                                                             | 420 030            |
|                    | <i>Provisions—</i>                                                                                 |                    |
| 10 425             | Motor Vehicle Insurance .....                                                                      | 10 073             |
| 4 056              | Plant Accident Insurance .....                                                                     | 10 624             |
| <u>\$8 495 653</u> |                                                                                                    | <u>\$9 248 830</u> |
|                    | <b>THESE FUNDS ARE REPRESENTED BY—</b>                                                             |                    |
|                    | <i>Current Assets—</i>                                                                             |                    |
| 252 446            | Cash at Treasury .....                                                                             | 468 548            |
| 443 371            | Stock on Hand .....                                                                                | ....               |
| 121 280            | Work in Progress—Deferred Charges .....                                                            | 122 309            |
| 946 754            | Accrued Charges—Plant Hire .....                                                                   | 1 761 567          |
| 87 181             | Stores Issues .....                                                                                | ....               |
| 393 748            | Workshops .....                                                                                    | 493 249            |
| 2 600              | Apprentice Tool Kits .....                                                                         | 654                |
| 2 247 380          |                                                                                                    | 2 846 327          |
|                    | <i>Fixed Assets—</i>                                                                               |                    |
| 16 166 804         | Land Buildings, Plant and Equipment at Cost .....                                                  | 16 763 338         |
| (9 918 531)        | Less Provision for Depreciation .....                                                              | (10 360 835)       |
| <u>\$8 495 653</u> |                                                                                                    | <u>\$9 248 830</u> |



## STATEMENT OF SOURCE AND APPLICATION OF FUNDS

| 1983<br>\$         |                                                      | 1984<br>\$         |
|--------------------|------------------------------------------------------|--------------------|
|                    | <i>Source of Funds—</i>                              |                    |
| 301 563            | Profit from Operations .....                         | 761 894            |
| 1 122 518          | Add Non-Cash Item Depreciation .....                 | 1 020 307          |
| 1 424 081          |                                                      | 1 782 201          |
| 85 560             | Less Profit on Sale of Plant Less Costs .....        | 105 982            |
| 1 338 521          |                                                      | 1 676 219          |
| 96 783             | Decrease in Working Capital .....                    | ....               |
| ....               | Increase in Plant Accident Insurance Provision ..... | 6 568              |
| 7 588              | Increase in Motor Vehicle Insurance Provision .....  | ....               |
| 340 010            | Proceeds from Sale of Plant .....                    | 363 457            |
| <u>\$1 782 902</u> |                                                      | <u>\$2 046 244</u> |
|                    | <i>Application of Funds—</i>                         |                    |
| ....               | Increase in Working Capital .....                    | 613 880            |
| 47                 | Decrease in Plant Accident Insurance Provision ..... | ....               |
| ....               | Decrease in Motor Vehicle Insurance Provision .....  | 352                |
| 23 050             | Improvements to Depots .....                         | 47 968             |
| 95 152             | Purchase of New Plant .....                          | 84 631             |
| 1 629 127          | Purchase of Replacement Plant .....                  | 1 275 453          |
| 35 526             | Purchase of Workshop Equipment and Tools .....       | 23 960             |
| <u>\$1 782 902</u> |                                                      | <u>\$2 046 244</u> |